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## ORIGINAL ARTICLES

### ALCOHOL AS A FACTOR IN MENTAL DISEASES\*

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The last decade or so has witnessed a great change in the relation of the physician to the public. The physician has come to realize that his duties are more than merely curing diseases,—that they include the far greater task of preventing them.

In olden times medicine concerned itself less with the causes of disease than it did with symptoms and treatment, in matters of which it was neither safe nor desirable to instruct the laity. With the discovery of micro-organisms, the causes of disease began to occupy the medical man as never before, and it soon became evident that were any progress to be made against wide-spread contagions the physician must take the layman into his confidence and they must work together. Therefore, the doctor has taken up his new duty of prevention as well as cure, and all over the country has been educating the public, and in turn asking its help. Witness the great movement for prevention of tuberculosis, the effort to save the babies by milk stations and instructions as to proper feeding, the

necessity of pure water and milk supplies, the part flies, mosquitoes and other insects play in the transmission of diseases, venereal prophylaxis, and so we might go on extending the list indefinitely.

So important has the prevention of diseases seemed to physicians, that they have come to demand a National Board of Health.

In all this great movement the matter of prevention of insanity has not received the attention it deserves. While great progress has been made in the care and cure of the insane, in a better understanding of the various types of mental ailments, the number of insane seems to be gradually increasing. That more effort has not been made in the prevention has to an extent been due to the fact that the average general practitioner has a meagre idea of mental diseases, and that asylum physicians seldom come in contact with beginning cases. We can never hope to do away entirely with insanity, but we can hope to lessen its ravages. We find upon examining statistics that three of the most important causes of insanity are heredity, syphilis and alcohol.

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The prevention of syphilis is receiving attention at the hands of the profession, but the fact that the abuse of alcohol is a potent cause of insanity has been overlooked not only by the general practitioner but by the psychiatrists as well, as is evidenced by the fact that only of comparatively recent years do we find any widespread mention of alcoholic insanity in asylum reports. In studying alcohol as a cause of mental derangement we should consider it in three ways,—first as to its hereditary effect, second as an accessory or contributory cause, and, third, as a direct cause. Forrell and others claim that alcohol acts on the germ plasm, which it injures by its toxic effect. Still others believe that it may exert its poisonous effect through the placental circulation. Forrell found that out of two thousand idiots in Switzerland, a very large majority had alcoholic parents, and, furthermore, that in a large number of these cases the date of conception could be definitely placed during the carousal and fest seasons, at which time it was customary for the people to drink much more than usual. It seems reasonable that the germ plasm would partake in the general poisoning of the body. Often we find a history of alcoholism in the parents in families where there is one defective child, the others normal. As an example I might mention the case of an idiotic child admitted to the asylum some years ago. He had several healthy brothers and sisters. There was no evidence of injury at birth or sickness in early life, and no history of insanity in the family, but a history of heavy drinking on the part of the father for some years, during which period the child was conceived.

Kräpelin, the great German psychiatrist, found in twenty-nine families in which the father and mother were habitual drunkards the following results, which he says can be partly, at least, attributed to alcohol.

There were thirty-three abortions and 183 living children. Of this number 158 were personally observed. Sixty died in the first year, ninety-eight were abnormal mentally, thirty-five being nervous and psychopathic, eight epileptic, twelve imbecilic and three idiotic. Of the forty mentally healthy six were physical weaklings and retarded in their development, seven were rachitic and four tuberculous. This leaves but twenty-three mentally and physically healthy, and of these eight showed distinct stigmata of degeneration. So we see that in these twenty-nine families, where there were 158 children observed, only seventeen were absolutely normal. Bourneville found that in idiotic and epileptic children in 35% of the cases the father was an alcoholic and in 3% the mother. Some place the percentage in this class of defectives as high as 85%.

I find it a very difficult matter to compile accurate statistics in regard to the importance of alcohol as an hereditary factor, because it is not at all uncommon to have relatives of the patients deny that the ancestors drank, even when it is a matter of common knowledge; so I think it is safe to take it for granted that any percentage we may be able to obtain is far too low. In about five hundred insane admitted to the Michigan Asylum during the past year there is a history of alcoholism in the ancestors in 17%; in the majority of instances the defect was in the father. Of the special groups, alcoholics themselves show the highest percentage. Twenty-eight per cent. of the known cases had fathers or mothers who were drunkards, and taking also into consideration the collateral inheritance, 40%. This is in accord with the views of those who believe that one form of degeneracy is liable to be passed on unchanged to the offspring. The epileptics show the next highest percentage, namely 30%. General paretics hold third

place, 25%, while the percentage of alcoholism in the ancestors of imbeciles is rather low.

In Dr. Parker's report of the asylum at Glasgow, Scotland, we read the following: "Drunkenness is as notable a feature as ever among the parents of our admissions, whose breakdown or arrest of mental growth has taken place during the period of most rapid development. Out of 282 admissions in 110 cases only could a definite history be obtained. Of these 110 a history of parental drunkenness was obtained in fifty-nine instances, and in fifty-one the parents were sober or total abstainers. This gives a history of 53.6% of the cases showing a history of parental use of alcohol." He further states that in those cases that breakdown before the twenty-sixth year there is in 78% parental use of alcohol. These figures, I think, are sufficient to prove the importance of alcohol as a factor in the production of an unstable nervous system through the ancestors.

As an accessory cause of insanity, alcohol also plays an important rôle, but here it is at times difficult to say whether the abuse of alcohol is the cause or the result of the mental derangement. It is not uncommon to have a patient recovering from mental excitement tell us that during the early stages of his excitement he drank excessively, and to attribute his final complete breakdown to this excess. In 17% of our cases of dementia præcox there is a history of excessive drinking, and in many of these it undoubtedly contributed to their breakdown. A German writer states that in about half of the cases of insanity not directly due to alcohol it was an important factor in the production of the mental disturbance, and in 65% of the male epileptics alcohol is thought to be responsible for their commitment; that is, they would probably have been able to live at home if they had abstained from alcohol, which tends to make

them more quarrelsome. Another form of disease in which alcohol plays an important accessory rôle is cerebral arterio-sclerosis. We find that in 40% of our cases of arterio-sclerosis there is a history of excessive drinking. Kræpelin shows that in arterio-sclerosis as affecting the brain 64% of the cases are alcoholics. It must be remembered that his statistics are gathered from a people who are beer-drinkers, but he admits that many of them use whiskey also. He, however, sees no difference in the psychosis produced by malt and distilled liquors.

The relation of alcohol to general paresis is an important one. A great many psychiatrists claim that three-fourths of the cases of general paresis have contracted syphilis during an alcoholic bout, and often syphilitics would not develop general paresis but for their alcoholic habits. Thirty-three per cent. of our cases of general paresis admitted during the past two years give a history of alcoholic excesses, but in many of these cases it must be admitted there are other important factors, such as heredity and faulty treatment of the primary infection.

We now come to the consideration of alcohol as a direct cause of insanity. Here, as elsewhere, statistics vary, depending on the section of the country in which they are compiled and the personal equation of the writer. Any one who has visited Scotland must have noticed the number of drunken men and women in the streets of the smaller towns on a Saturday night, and one would expect to find some relation between this condition and the forms of mental diseases in their institutions. I have already spoken of the importance alcohol bears as an hereditary factor in the insane at Glasgow Hospital. In the year 1908 there were admitted to this hospital three hundred patients, and of this number 18% were cases in which alcohol was directly the



cause of their mental derangement. Many of the English asylums give a very high percentage of alcoholic cases. At Bixley we find alcohol either the cause or contributory cause in 48% in '05 and 55% in '06. In the 1073 cases admitted to the Psychopathic Clinic at Munich in the year ending 1905, 30% of the male patients were suffering from psychoses directly due to alcohol and 6% of the female cases. Cotton gives the following statistics from the Danvers Hospital in Massachusetts. In 1904 31% of the admissions were alcoholics, in 1905, 37% and in 1906, 40%. In the Michigan Asylum during the past two years we have had sixty-two cases of alcoholic insanity, about 7% of the total admissions, or about 15% of the male patients. Our patients are drawn largely from agricultural communities, and we have not as large a percentage of foreigners as some of the Eastern asylums. While it might appear from the above statistics that alcoholic insanity is apparently on the increase, it must be remembered that in former years many of these cases were classified under different headings.

Alcohol produces several different types of insanity, viz., delirium tremens; alcoholic hallucinosis, characterized by active hallucinations of hearing and a clouded consciousness, but to a less degree than in delirium tremens; alcoholic paranoia, characterized by ideas of persecution and infidelity, and, lastly, the more rare Korsakoff's Disease, in which there is peripheral neuritis, failure of memory for recent events and a tendency to fabricate. Those suffering from the first two types usually recover promptly, although it is not uncommon to have some of the chronic forms follow cases of delirium tremens. As to the comparative importance of the different alcoholic drinks, very little definite knowledge can be obtained, as there are few drinkers who confine themselves to any one liquor. In

general it may be said that whiskey, brandy, hard cider, etc., are more productive of injury to the nervous system, but that any alcoholic beverage continued for some time is harmful. In Germany, where beer is the common drink, it is said that there are fewer cases of delirium tremens than in this country, but more cases of mental deterioration. Our own cases were too few from which to draw conclusions. There were only four who denied drinking any other form of liquor than beer, and of these four, three had acute curable types of alcoholic insanity. Our cases in which a history was available were tabulated as regular and periodical or spree drinkers. We found no connection between the manner of drinking and the type of insanity, but found the percentage of regular drinkers much in excess of the spree drinkers.

In 78% of our cases of alcoholic insanity there is a history of insanity or its equivalent, that is, epilepsy or other psychopathic conditions in the ancestors, so undoubtedly many alcoholics start life handicapped. They inherit weak, nervous systems, and so consequently weakened will powers, which make them victims to the alcohol habit. In fact, the abuse of alcohol may be said to be retroactive—alcohol leads to defective offspring who in turn become alcoholic. The final result is degeneracy both mental and physical.

There is perhaps too great a tendency to attribute to alcohol all poverty and degeneracy, yet its abuse nevertheless does play a large part in filling our institutions for the insane, the epileptic and imbecilic. In the Michigan Asylum we find in compiling our statistics for the past two years that 25% or one-quarter of our admissions are committed as the direct result of alcohol and syphilis. This, of course, does not take into account the large number of cases in which alcohol or syphilis has played a secondary part either by inheritance or



otherwise, so it would not seem unreasonable to assume that at least 40% of our admissions come to the hospital as the result of these two conditions, both of which are preventable.

In past years the temperance movement has done a vast amount of good, but its leaders have more often approached the question from the sentimental, economical or religious point of view rather than from the standpoint of the physiologist or psychiatrist. It is time that physicians more generally took an active part in prevention by educating the people to the dangers of the abuse of alcohol, as they are doing to prevent tuberculosis, typhoid, syphilis, etc. In fact, we, in this country, ought not to be behind our co-workers in foreign lands. In Germany so strong is the feeling in certain sections against its abuse that some of the large hospitals are not using it medicinally. Indeed, it is doubtful under the present teachings of our pharmacologists if we are justified in prescribing it. Dr. N. S. Davis many years ago claimed that it was of little use medicinally. In France placards are used, which by pictures and simple language instruct the people that alcohol produces mental diseases and degeneracy. In England and other countries we find similar movements. In this country Dr. Benjamin Rush was one of the first to point out that it produces mental disease, and since his time a number of notable physicians have advocated similar ideas. Dr. Peterson, professor of psychiatry and former president of the New York Lunacy Commission, has even gone so far as to have printed on the back of his prescription blanks, "Alcohol is a poison. Some claim it is a food, but if so, it is a poisonous food." This method of expressing his point of view may be extreme, but at any rate it shows the estimate in which alcohol is held by one of our prominent psychiatrists.

The fact that so many drunkards start life handicapped, having inherited nervous systems not capable of bearing strain or temptation, should bespeak better care for this class of people. They should be treated more like sick persons and less as criminals. The frequent arrests and short jail sentences in the majority of cases are of little use. The drunkard is retained only until he sleeps off the effects of his debauch, and then goes out, perhaps to perpetuate his kind. Michigan, as New York City and the State of Massachusetts have already done, should provide a farm or institution where habitual drunkards can be cared for and treated under medical guidance. Such an institution would, in time, be practically self-supporting, and would eventually relieve the asylums of a number of its chronic insane. Some years ago a statute was enacted in Michigan providing for the admission of habitual drunkards not insane to the State asylums, the length of their detention depending on the discretion of the superintendent. Under this act quite a number were admitted, and derived considerable benefit. A few years later a general insanity law was passed, which repealed, though not by the intention of the framers of the law, the Special Inebriate Act. Consequently this class of unfortunates has no provision for its care. It happens occasionally that habitual drunkards, on account of their quarrelsome and dangerous tendencies, are admitted as insane, but after reaching the asylum they clear up in a few days or a week, and must be discharged, much to their detriment, there being no law to detain them. Providing for their care in asylums was a step in advance, but such alcoholics that cannot be adjudged insane would be more properly cared for in a separate institution, where they would not be compelled to mingle with the insane.

## OPERATIONS FOR THE RADICAL CURE OF INGUINAL AND FEMORAL HERNIA UNDER LOCAL ANESTHESIA\*

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Only about ten per cent. of those who suffer with inguinal or femoral hernia submit to operation for its cure, and when it is considered that over two million people of this country have one or other of these forms of rupture it is clear that a very large number of patients prefer to endure the distress, pain and danger of this deformity rather than undergo an operation for its cure. Inguinal hernia is more common than appendicitis and gallstones together, and while it does not produce so high a mortality there is a definite death-rate from strangulated hernia. It has been concluded from carefully compiled statistics that the working efficiency of individuals with rupture is thereby impaired from 15% to 50%. Then, in addition to the pain and bodily distress, there is always a certain amount of worry and in many cases a morbid sensibility, directly traceable to the hernia.

A consideration of these facts, along with a knowledge of what surgery can do for these cases, has brought the medical profession to be almost unanimous in advising operation in every case. Now the fact is briefly this: ninety per cent. of these patients do not take this advice. They keep on with the rupture and truss. Several circumstances can be mentioned that account for this decision against medical counsel. In a few instances the expense of the operation, or the possibility of recurrence, or the length of time required for the cure, may prevent the patient from accepting the

benefits of an operation. However, in many cases the dread of a general anesthetic is what stands in the way. The prospect of complete narcosis arouses in the patient's mind considerable apprehension, not only of the loss of consciousness itself, but in addition to this, of the magnitude of the operation. Then, it cannot be forgotten that general anesthesia does claim its mortality, and death from anesthesia is as liable in operations for hernia as in those in which the patient's life is already jeopardized by disease. Not a small factor in this connection is the strain that is put upon the sutures by the vomiting after the anesthetic.

In order to perform a herniotomy successfully under local anesthesia, an attention to details and to a refinement of technique is required beyond that usually practised when general anesthesia is employed. The preparation of the patient is the same as when ether or chloroform is to be used. One half-hour before beginning the operation a quarter of a grain of morphine and one one hundred and fiftieth of atropine is to be given hypodermically. The cocaine to be used should be sterile. It can be obtained in crystal form in sealed bottles, but can be readily sterilized by dry heat, or the solution boiled. The strength of the solution used varies considerably, but there are certain limitations beyond which it becomes dangerous or ineffectual. A one per cent. solution is liable occasionally to produce toxic effects, and, on the other hand, when the dilution reaches one in a thousand it

\* Read at the Forty-fifth Annual Meeting of the Michigan State Medical Society, Bay City, September 28, 29, 1910.

produces little or no anesthetic effect beyond that obtained from the use of sterile water. I have found that a grain to half an ounce gives very satisfactory results. A weaker solution would produce anesthesia of the skin if it is injected endermically, so that the cutaneous structures are distended. An incision made through the skin while thus distended is painless, but sensibility returns within a few minutes, and the patient experiences a soreness during the latter part of the operation. In addition to this the introduction of the skin sutures is very painful. A solution of one in five hundred will produce anesthesia of the skin that will persist throughout the operation, and I believe this is the strength used by Bodine. In the subcutaneous tissue where the solution produces no tension, it must be used stronger, while a very weak solution is sufficient to produce nerve-block.

A row of injections should be made into the skin the whole length of the line of incision. The injection should begin in the skin at a point corresponding to the outer margin of the internal ring, and should extend down to the base of the external ring. As soon as the whole extent of the line for the incision is completed, the incision should be made with one stroke extending completely through the skin. The procedure of making an incision through the skin with local anesthesia is well known to you all, but a degree of perfection is required beyond the ordinary when it is to be followed by a prolonged operation. There are a few details worthy of note:

1. Touch the skin with pure carbolic acid where the initial puncture is to be made with the needle.

2. The re-insertion of the needle when it is made to continue the injections should be in the margin of the area already anesthetized.

3. The solution should be injected into the skin, not under it.

4. The knife should be sharp.

5. The incision should extend from a point in the skin corresponding to the upper margin of the internal ring to a point opposite the lower margin of the external ring.

6. The skin should be completely divided by this incision, so that the wound will gape and expose the subcutaneous tissue.

Having thus divided the skin, we approach the second stage of the operation. All the structures covering the canal and sack are extremely sensitive, and the application of cocaine solution or its injection into it will not produce anesthesia. It is therefore necessary to apply the local anesthetic in some other way. This can be done by nerve-block.

It is a unique feature of the surgical anatomy of inguinal hernia that the trunk of the nerve that supplies the whole field of the operation is readily exposed after the first incision. This is the ilioinguinal nerve. Occasionally there are two nerves, but they always have the same direction and bear the same relation to surrounding structures. The second step of the operation is to find this nerve trunk and to inject some of the solution directly into its sheath. In order to do this some of the solution is to be injected into the tissue about the internal ring. The fibres of the external oblique are then to be exposed and divided so as to expose the internal oblique muscle. The fibres of the external oblique are raised and drawn upward. The ilioinguinal nerve will be found lying upon the internal oblique, passing downward and inward into the inguinal canal. Some pain may be experienced in this procedure, for the solution when injected into the tissue about the internal ring causes no distention, and accordingly the narcosis depends entirely upon the cocaine present. With the weaker solutions, one in five hundred and one in a thousand, there must be very sharp pain. The nerve is easily identified



as a gray cord crossing the red brown muscle fibers. It can be taken in the fingers and the needle inserted without pain. Sufficient fluid is to be injected to distend and whiten the sheath. When this is done, all the structure in the whole surgical field are immediately and completely anesthetized. While this is exactly what must be expected from a knowledge of the ilioinguinal nerve and its distribution to the inguinal region, it strikes one as being almost wonderful when it is first practically experienced. The narcosis permits a thorough operation with no pain. However, dragging upon the muscles, vessels, or other structures is painful, but this is not necessary. There is one structure that is not anesthetized by the nerve-block: that is the sac. However, it is not the source of any pain unless handled very roughly. Before it is ligatured and excised some of the cocaine solution should be applied to its inner surface. This will make the procedure painless.

I believe the anesthesia will suffice for any of the recognized methods of operation, but I have never tried any method in which the cord is removed from its normal position. It is allowed to lie in its original bed.

To revert to the regular scheme of the operation, the third step is the exposure and separation of the sac, the opening of the sac, and the liberation and return of its contents, if any, and finally the application of the ligature and excision of the sac as described. The fourth step includes the remainder of the operation, that is, the suturing of the structures that formed the covering of the canal, the internal oblique to Poupart's Ligament, the reuniting of the fibres of the external oblique, the approximation of the subcutaneous tissue, and the closure of the skin. The narcosis permits the replacing of these sutures thoroughly, painlessly and without any inconvenience.

My experience with this method of

operating for inguinal hernia has only extended over a year, and does not include very many cases, but the results have been very satisfactory. One of my earliest cases was a patient of Dr. Walsh, of Florence, Ontario. It was an inguinal hernia of about twenty-five years' standing, and although the sac was very adherent and thickened, it was separated and the operation completed with little or no pain.

Not the least of the advantages to be derived from the local anesthetic is the relief from anxiety experienced by the patient when he is informed that it will not be necessary to administer a general anesthetic. However, there are a certain number of cases in which a local anesthetic is not suitable, viz.: 1, Certain nervous patients who have nervous chills and are otherwise unable to remain quiet during the operation. 2, Patients in whom there is a large amount of subcutaneous fat. 3, Children.

The distribution of the nerve supply to the surgical field of femoral hernia does not permit the use of nerve-block, but nevertheless the operation for its radical cure may be done thoroughly and with little pain by the use of cocaine anesthesia. The reason for this is the fact that the radical operation for femoral hernia requires but little cutting and the structures divided have but a scanty nerve supply. The local anesthesia is obtained in the skin in the same manner as in the inguinal hernia. For the fascia and subcutaneous fat a one per cent. solution serves very well. This may be applied as the sensibility of the tissue demands. The sac should be opened as soon as separated, and can then be readily narcotized by an application to its visceral surface. The sac can then be transfixed and excised painlessly. In closing the canal the deep fascia is attached to Gimbernat's Ligament, the superficial fascia and subcutaneous tissue drawn together and the skin closed.

In the great majority of cases the results of the operation for the radical cure of either inguinal or femoral hernia is satisfactory, but it is the object of this paper to advocate the use of local in place of general anesthetic in a larger percentage of cases.

For the reasons given at the beginning of this paper, I believe that the operation of choice is the operation under

local anesthesia. There is one class of cases in which the demand for local anesthesia is, I believe, almost imperative—that is strangulated hernia. In these cases the depressed or collapsed condition of the patients is such that the administration of the general anesthetic undoubtedly contributes to the high mortality attending this operation.

#### DISCUSSION

DR. JOHN REYCRAFT, Petoskey.—We are having very little discussion upon any of these papers, and for that reason I think the doctors should take them up and discuss them. A paper so good as the one Dr. MacMillan has just read should not be gone over without discussion. The people are afraid and unwilling to be operated upon under a local anesthetic, and with a good half of the profession, we will find that they would not be willing to operate if they were compelled to take the course the doctor has spoken of. If the doctor gets his patient under a general anesthetic, he is in better shape to proceed with the operation. The experience I have had with hernia is that if you come to dissect a sac, when you have tied it off and make some cuttings on the inside, you are not going to be satisfied, because your patient wiggles like a serpent almost on the table, and I don't see why we should depart from the old idea of giving the old general anesthetic and take up this new fad of using local anesthesia, if we can use H. M. C. tablets and have our patients quiet, and find no harm in it. I use it a great deal in No. 2 and 3. If we can get them under a general anesthetic we avoid all this trouble that the Doctor claims. It is a mighty easy thing after one tablet is given. I don't see why the Doctor has departed from the old line of procedure, and if he can show me where he can do this without a great deal of harm I will submit readily to his findings.

DR. LOUIS J. HIRSCHMAN, Detroit.—Dr. Reycraft has stimulated me in getting up and making a few remarks as to the use of eucaïn, and I want to make a confession. If the *substitution of local anesthesia for general anesthesia* is a fad, then I am decidedly a *faddist*. It is much easier for the surgeon to operate on a patient under a general anesthetic, we all agree with that; but it is not so easy for the patient. Many patients have been operated on for so called trivial troubles under general anesthesia where we have had

occasional deaths from post-operative complications, such as nephritis and pneumonia. There has been a demand for a local anesthesia so that we can still further reduce mortality on surgical operations. I am glad Dr. MacMillan has read this paper, and glad to see that he has "risen up" in the profession, as it were. Starting out with the adoption of local anesthesia in rectal surgery, he is now with the pelvic and abdominal men, and we hope he will soon go up still higher. There is no question that the men in the medical centers are using local anesthesia not only in rectal work, but once in a while taking out an appendix, where nitrous oxide is not available, and thus occasionally saving a life. Any one who can do as good an operation with local anesthesia as under general is doing a distinct service to the profession by bringing out the fact, and if he is a *faddist*, then give us more *faddists* of that kind.

DR. W. H. BELKNAP, Greenville.—I have listened with pleasure to this paper on local anesthesia. I think, in certain cases, it has a decided advantage. I wish to mention a case: a lady seventy-four years old, practically moribund from heart disease for two weeks previous, came to the hospital with a strangulated inguinal hernia and was unfit for a general anesthetic. I used 30 minims of codrenin. Anesthesia was complete and healing perfect.

I am in favor of local anesthesia in suitable cases, also nitrous oxide and oxygen as a general anesthetic.

DR. J. A. MACMILLAN, Detroit (closing discussion).—I wish to state that Dr. Reycraft will be surprised to find how easy it is to locate the ilio-inguinal nerve. After its sheath is injected with the solution, the surgical field becomes anesthetized immediately. It does not usually suffice for the sac. In some cases after the nerve-block the patient experienced no pain when the sac was amputated. However, it is a simple matter to open the sac and apply the solution near the neck.

## DIAGNOSIS OF SURGICAL DISEASES OF THE KIDNEYS AND URETERS\*

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Assuming that every surgeon has a thorough knowledge of the general anatomy of the kidney, I shall dwell only on some of the minute structures of this gland, which will be alluded to in the general surgical conditions under description. The kidneys lie behind the peritoneum, and are surrounded by a mass of fat and loose areolar tissue, which constitutes the fatty capsule, consisting of two distinct layers—the transversalis layer of fat and the deeper or true perinephric fat which completely surrounds the kidney; between these two is a layer of connective tissue known as the retro-renal fascia, posterior surface. The fascia pre-renal, anteriorly, named by Gerota, is very marked on left side of body, associated with retro-peritoneal tissue of the descending meso-colon; these fascia join along the convex border. The retro-renal layer is lost in the periosteum of vertebral column, while the pre-renal layer passes over the abdominal vessels to be continued on the other side of the body. The two layers form the third capsule of the kidney—*fascia renalis*. Anteriorly it lies close to the peritoneum, and posteriorly it is connected with sheaths of psoas and quadratus lumborum muscles. On the inner margin of these muscles the union between the fascia renalis and muscle sheaths is firm. This holds the kidney in place,—outside of this tissue is supra-peritoneal or peri-renal fat. The vessels also help to hold the kidney in

position. The true capsule covering the entire organ passes over the margin of the hilum, enters the interior of the kidney, and covers the walls of the sinus. The sinus or central cavity being lined with a prolongation of the fibrous coat of the kidney, enters through a longitudinal fissure, the hilum, which is situated at that part of the cavity not surrounded by kidney structure. Through this fissure the blood vessels and excretory duct pass. The duct, or ureter, after entering, dilates into a funnel-shaped sac, the pelvis, which divides into two or three tubular divisions which, in turn, subdivide into smaller divisions called calyces renales.

The blood vessels after passing through the hilum are continued in the sinus or central cavity, lying between the lining membrane and the excretory apparatus before entering the kidney substance. This is the usual course of the renal vessels, but sometimes a separate artery enters directly into one or other pole, which explains why in a removal of a kidney patients sometimes die of hemorrhage, in spite of the ligation of all the vessels entering the hilum.

Let us dwell briefly on the methods of examining before taking up the surgical diseases referred to in the enunciation. While it is almost impossible to make a direct examination of the kidney, that is, by inspection and palpation, owing to the fact that it is hidden or obscured by the ribs and viscera, yet these two methods are not accorded the attention that is due them;

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in every instance inspection should constitute the first step in determining the nature of a surgical disease. Inspection should be carried on with the utmost precision, the surgeon noting carefully any swelling, growth or ecchymosis from traumatic causes.

The second step in the process of examination is palpation. This is an extremely important factor in differentiating the abnormal form from the normal.

The posture of the patient while undergoing bimanual examination should receive the careful consideration of the surgeon. The best results are obtained when the patient assumes a position with the trunk at an angle of  $135^{\circ}$ , with the legs horizontal, and the back supported by the leaf of the examining table. The head and trunk should be supported well, so that the abdominal muscles may be relaxed so as not to interfere with the examination. The patient is told to breathe naturally, so that during the palpation the fingers may sink deeper until the lower end of the kidney is felt. If a kidney is enlarged or swollen to any degree it may be palpated, since any enlargement will cause the lower pole to project further down than normally. Where there is marked enlargement there may be a neoplasm, a tuberculous kidney, a pyonephrosis, or a hydronephrosis. The upper portion of the kidney being fixed, the tumor extends in the direction of least resistance, namely, in a downward direction, rendering it easily palpable.

In order to differentiate these difficult surgical diseases one must rely, as much as possible, on the method of palpation. With a cultivated sense of touch, or *tactus eruditus*, a great deal may be accomplished in the way of facilitating confirmation of diagnosis by other means.

If a kidney is enlarged and the surface is rough and hard, a malignant tumor may be suspected; or if it is large and has a rounded,

smooth surface, the pathological entity may be an adenoma, uronephrosis, pyonephrosis, or an echinococcus cyst. Fluctuation will indicate fluid accumulation; although an echinococcus cyst may be mistaken for solid tumor.

Much difficulty is experienced in determining whether a tumor belongs to the kidney or is attached to the liver, or whether it is so-called corset liver projection. Frequent palpation and also an effort should be made to establish the relation of the colon. A tumor of the left kidney must lay behind the colon. The expedient of inflating the colon with air is a very reliable procedure, as it causes the inflated portion to intervene. The ascending colon does not always pass in front of the right kidney, but in some cases it crosses over the lower pole of the right kidney, so that the inflation test may be resorted to in this case. Again in the left side, tumors of the spleen and those of the kidney are most perplexing, and we are compelled to depend solely on bimanual palpation in a splenic tumor. It can usually be associated with tuberculosis. The hilum of the spleen can be felt at the umbilicus by a marked depression above the umbilicus. When in tumors of the kidney a hard nodule is felt in the area corresponding to the pelvis, it is most likely a calculus. If the kidney is enlarged and the border is felt as a firm, irregular mass, it is pretty evident you have a malignant tumor.

When the kidney is large but maintains its normal shape, with the surface smooth or slightly bulging, the condition may be calculus, pyonephrosis, hydronephrosis or tuberculosis. Before the discovery of the X-ray the location of calculi in the pelvis of the kidney was a very difficult matter. Now by means of the Roentgen Rays the diagnosis of stone in the kidney may be made with greater accuracy. Calculi may form in any part of the kidney, though the

renal calices and the renal pelvis are the most frequent sites of their formation. A calculus forming in the renal parenchyma is small and shaped like a pea or bean; if it forms in the calices, it is large and has a rounded shape; if it develops in the ureter it has a long cylindrical form like a date seed. Hence the form of a calculus is determined by the shape of the viscus in which it is imbedded. In about one-half the cases a kidney has a single stone, and in one-third of the cases more than two stones.

The different kinds of calculi give different degrees of shadow in radiography. A calculus composed of oxalate gives a very sharp shadow; one composed of urates or uric acid a shadow less well defined in outline, while calculi composed of soft phosphates give almost no shadow, in which way they resemble biliary calculi.

In no other part of the body may a diagnosis of pathological conditions requiring surgical intervention be made with greater precision and certainty than the kidneys and ureters. This is made possible since the introduction of such mechanical agencies as the cystoscope and X-rays already mentioned. The latter, of course, have their wonderful usefulness in the diagnosis of calculus of the kidney and ureter. Sometimes, however, a shadow may be misinterpreted, as in the following:

I. Phleboliths. II. Intestinal impaction. III. Foreign bodies in the intestinal tract. IV. Bullets or shot in the soft parts. V. Calcified structures. VI. Imperfections in the photographic appurtenances.

All of which have a tendency to confuse the diagnosis. Probably the phlebolith is the most common object which confronts the surgeon; a phlebolith is always round, while a calculus is cylindrical, the latter shaping itself in confirmation with its environment. An instance has been reported where an operator got a beautiful shadow.

An exploratory operation was made but no calculus was found, the radiograph being that of a mole on the patient's back.

Cystoscopy occupies an important place as a means of determining an obstruction in the ureter, and also the functioning of each kidney, showing which organ is discharging pus or blood; this instrument is valuable as a means of determining which pelvis contains residual urine. Sometimes, however, the technique may be interfered with by certain features or peculiarities in structure of the ureters, as a diverticulum or a kink in the ureter due to pressure from a division of the renal artery.

*Blood in the Urine.*—To determine the source of this abnormal feature it is necessary to wash the bladder; if, after a period of a few minutes, the water comes away clear, it is quite evident that either the ureter or kidney is the source of the hemorrhage. The bladder is partially filled and the cystoscope is introduced, the fluid (ureteral) carefully inspected, when it can be observed which ureter is emitting the blood. The question arises, what is the cause of this blood? It may be stone in the kidney, tuberculosis, neoplasm or result of a recent catheterization. The X-rays are now called into play, but while many times the results are negative, the condition may be still surgical.

In addition to the aforesaid pronounced cases, hemorrhage may be due to the following: (a) Overfilling of the kidney with blood caused by strenuous exercise, and regarded as a result of venous congestion. (b) Hemorrhage occurs with uronephrosis. (c) Traumatism. (d) An old interstitial inflammation, or parenchymatosis.

If hemorrhage be present as determined by the tests for occult blood, it is, in all probability, due to parenchymatous inflammation.

While we have pain, hemorrhage and enlargement of the kidney in tuberculosis,

these are symptoms also in evidence in calculus or neoplasm. Tuberculosis may follow the development of a calculus, or vice versa. The tuberculin test seems to be resorted to in many clinics. The effect of the employment of this test is a marked increase of tubercular bacilli in the urine and a marked tenderness over the affected kidney.

Kidney tuberculosis is most generally primary as compared with that of the bladder. If there are evidences of tuberculosis in the bladder, these are usually secondary. Another feature to arouse one's suspicion of tuberculosis of the kidney is the appearance of the ureteral openings and the surrounding area; the ureteral opening in tuberculous conditions is rigid and non-contractile, which in every instance is indication of disease, as in a normal ureteral opening the contractions are easily observed. By means of the ordinary examining cystoscope we can determine which kidney is diseased (tubercular) by the appearance of the ureteral orifice—which is always large, thick, ulcerated and covered with red granulations. In conclusion, a diagnosis of renal tuberculosis can be made by the cystoscope alone, notwithstanding the absence of tubercle bacilli in the urine.

A calculus may be present in the kidney and yet cause no particular disturbance to the patient, but is probably due to the fact that the inflammatory process is aseptic; on the contrary, if there exists a suppurative condition due to an infection, the symptoms are very marked. If the calculus obstructs the urine, or if it lodges in the ureter, the pain is most pronounced. In cases of this type radiography and palpation and the ureteral catheter are the means of determining the precise nature of the condition.

If calculus is located in the parenchyma of the kidney with an acute inflammatory process due to venous distention, the pain-

ful attacks are continuous until the calculus worms its way through the capsule or is forced into the pelvis of the kidney.

Another common symptom of calculus in the kidney is hemorrhage. If the amount is scanty the microscope will determine it. On account of its irregular borders, a calculus in the pelvis of the kidney may erode a branch of the renal artery.

It has been observed by different writers that many times in cases of anuria on one side a sympathetic condition will develop on the opposite. There still exists, however, a difference of opinion on this point. In the case of one kidney performing its excretory function and the other being under suspicion, a test should be made as follows:

Inject  $\frac{1}{4}$  c. c. of 4% solution of indigo-carmin in the quadriceps muscles; in ten minutes it will be noticed which ureter is discharging, since the blue will appear in the time stated; also it enables one in finding the ureters. This enables the surgeon to estimate the reserve power of the kidney. This drug is eliminated by the kidney alone. This agent is regarded as non-toxic, and passes through the body as in a normal physiologic process. It has been my privilege to see this demonstrated a number of times; the appearance of the color in the ureter excretion was usually prompt, seldom exceeding ten minutes. The test is infallible.

The fatty capsule, surrounding the greater portion of the kidney, with all its protective features, is by no means invulnerable. Its blood and lymph vessels are intimately connected, if not anastomosing, with those of the kidney itself. It can be easily understood that an inflammatory process in the kidney may extend to the fatty capsule through the blood channels. Infecting material may travel through the capillaries into the urinary tubules and may also pass through the capillaries in the fatty



capsule. Further, a suppuration may invade this fatty structure from a neighboring pathological process. From the foregoing it is apparent that there are two types of suppuration about the kidney; the one arising from known renal infection and the other taking its origin from exterior causes, such as a traumatism or a suppurating empyema, or suppurating appendix. However, perinephric disease in many instances is result of bacteria entering the lower renal tract, emanating from an old prostatic disease, diseased testes or an infection of the urethra, all of this making the sources of infection in this fatty structure manifold. Now how can we tell when we have perinephric abscess? There is generally a fixed point of tenderness in the

so-called triangle of Grymfelt, an area bounded by the erector spinæ muscle, twelfth rib and the internal oblique. This space will be filled out on the affected side, and the abscess will be readily recognized with the patient in the sitting posture. The other symptoms consist of swelling, tenderness on palpation and immobility, and in the advanced conditions, edema of the overlying structures, and sometimes a pointing or fluctuation. An aspirating needle may be resorted to in doubtful cases. The origin of the abscess may be obscure.

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#### DISCUSSION

DEAN LOREE, Ann Arbor.—There is one thing in connection with Dr. Matthews' paper which I would like to discuss, and that is the diagnosis of renal tuberculosis. As the Doctor has well said, tuberculosis is rarely primary in the bladder. Having demonstrated tuberculosis of the bladder, we must then ascertain its primary focus. If it is in the kidney, the other one being healthy, that kidney will, in all probability, have to be removed. I cannot agree with Dr. Matthews that we are justified in removing this kidney from the cystoscopic picture alone.

The early manifestations of renal tuberculosis are from the bladder, and rarely from the kidney itself; for instance, the very first symptoms in ninety-nine out of one hundred cases begin with frequent and painful micturition. These patients should never be discharged with a urinary antiseptic and an irrigation for the bladder, but must be followed up—they must have a careful chemical and bacteriological examination of the catheterized sample of the bladder urine, and in

a certain percentage of these we will be able to demonstrate tuberculosis. Tubercle bacilli can be demonstrated by the ordinary staining methods in about eighty per cent. of tuberculous urinary sediments. We most resort to the inoculation of guinea pigs for the remainder.

There is one other point in the diagnosis of renal conditions that I think the Doctor did not mention; that is, the measurement of the kidney pelvis, demonstrating not only a hydronephrosis, but also the size and condition of the pelvis. I might describe the technique (chairman interrupts, time is up).

DR. MATTHEWS (closing).—The condition known as hydronephrosis, which I alluded to, only incidentally, is the result of a partial or complete obstruction of the ureter. A kink in the ureter, caused by the pressure from a crossing renal vessel, or the occlusion, may be due to a stone impacted in the pelvic opening of the ureter. I am glad the Doctor concurred with me in regard to the manifestations about the ureteral orifice as diagnostic of renal tuberculosis.

The next Annual Meeting of the Michigan State Medical Society will be held in Detroit September 27-28, 1911

## PELLAGRA\*

B. N. COLVER, M. D.  
Battle Creek, Mich.

Pellagra was earliest known in Northern Africa, where it is found still, in Egypt and Algiers. In 1735 it was recognized in Spain. It spread to Portugal and Italy. To-day all Southern Europe, especially Italy and Roumania, suffers from this disease. There are between fifty thousand and one hundred thousand in these two countries alone, a large number of pellagrins being found in the insane asylums.

Forty-five years ago two cases were recognized and reported in the United States, —one in New York and one in Massachusetts.

From that time until 1906-7, pellagra either did not exist or was unrecognized in the United States. In the last two or three years, however, a large number of cases have appeared in sixteen or more states, mostly Southern. Between five thousand and ten thousand cases have been recognized, a large number probably going unrecognized.

### ETIOLOGY

#### I. PREDISPOSING

##### (a) Intrinsic.

1. *Race*.—Seems to play no rôle.
2. *Age*.—All ages are affected, adults more commonly than young subjects.
3. *Sex*.—Has no influence.
4. *Heredity*.—There is no family transmission or occurrence which cannot be better explained by environment or habits than by heredity.

5. *Previous Disease*.—Has no influence except, perhaps, as it may bring about a general weakened state.

6. *Previous Habits*.—Alcoholism is a positive factor. At one time some observers believed this to be an essential cause. Any habit or practice which results in general lowered vital resistance is a predisposing agency.

##### (b) Extrinsic.

1. *Occupation*.—Any occupation which is accompanied by poverty or insufficient nutrition is affected. Cases from a large range of occupations have been reported.

2. *Habitation*.—As before stated, Northern Africa, Southern Europe, Southern United States, especially the Gulf States, furnish the large majority of the cases. An occasional case appears in the North which cannot be traced to any Southern origin.

3. *Season*.—Cases have begun in every month,—the largest number in the spring and fall months,—the month accredited in the most cases (beginning) being, I believe, November.

4. *Social Condition*.—The poor are most commonly affected. The well-to-do are practically immune, so it is said. Any case appearing in the middle classes must be traced to some other source of poor nutrition.

#### II. EXCITING

1. *Mechanical traumatism* or injuries seem to play no part.

2. *Chemical*.—Under this head may be classed the various ideas and theories about

\*Read at the Forty-fifth Annual Meeting of the Michigan State Medical Society, Bay City, Sept. 28-29, 1910.

corn as the source of pellagra. (a) It was formerly held that corn was not a complete food. It would not properly nourish the body if used excessively in the diet. The malnutrition resulting was charged with causing the disease. (b) It has been held that sound corn itself contains a toxin. (c) Corn picked before entirely ripe may ferment, under the action of a non-pathogenic unknown organism producing toxins. (d) Autointoxication (intestinal) due to an intestinal mycosis, which attacks the corn (and possibly other foods) after eaten has been urged. By some observers pellagra has been designated a state rather than a distinct disease. Any cause of marked malnutrition might produce a cachexia which would present the picture of pellagra.

3. *Thermal*.—Sunshine, by virtue of its heat or, more likely, its actinic rays, has been charged with initiating the disease.

4. *Bacterial*.—(a) Several bacteria have been described as causing a specific intestinal infection. All of these have been discredited. (b) A generalized infection, brought about by intestinal infection, invasion of the blood and secondary infection of the lungs, pleurae, pericardium and pia mater of the brain and cord, has been suggested (Cerri).

5. *Parasitic*.—In proclaiming this theory, Sambon, its chief advocate, attacks the corn theory on the following grounds: (1) Pellagra is not found in many places where corn is used extensively. (2), It is found, on the contrary, where corn is not used or grown. (3), Pellagra is appearing in new places or decreasing in former strongholds without any detectable change in the dietetic habits of the inhabitants. (4), All proof of the corn theory is only philosophical, and nothing has ever been scientifically proven by proper experiments or observation.

Sambon's theory is that the disease is due to a protozoan parasite transmitted probably through a stinging or blood-suck-

ing insect, possibly the sand fly or simuliid reptans, acting as carrier.

This protozoan probably enters and inhabits the intestinal canal, causing the persistent diarrhea and producing from the food mass the specific (?) toxins which produce the psychical, nervous, motor, sensory and cutaneous symptoms.

It is interesting to note that out of 175 cases of pellagra studied at the Peoria State Hospital, 84.8% showed protozoal infection in the feces.

In twelve out of eighteen autopsies, ulcers in the colon were discovered.

In another series of fifty-two cases reported by J. D. Long, protozoa (ameba) were found in the feces in fifty.

Long also reports twelve cases studied in the Philadelphia Hospital for the Insane, in which amebae were detected in the feces in every case.

#### PATHOLOGY

1. *Cutaneous*.—The skin undergoes sclerotic changes (becoming leathery), atrophies at the affected areas, and shows a deposition of pigment, which persists even after the active dermatitis is relieved. The subcutaneous fat is largely lost as the person passes into a cachectic state.

2. *Circulatory*.—The cardiac muscle shows pigmentary and fatty degeneration.

3. *Blood*.—There is often a simple anemia of mild or moderate severity, but nothing characteristic.

4. *Nervous*.—Pigmentation of the nerve cells of brain and cord has been noted. The same has been observed in the spinal ganglia. Sclerosis and degeneration of various tracts in the cord has been seen by different observers,—the crossed pyramidal tract in the dorsal region, the column of Goll and the column of Burdach (Lombroso). The meninges of cord and brain have been found thickened.

5. *Osseous*.—Deposits (cartilaginous) on the articular surfaces of the vertebra, en-



croaching on the intervertebral foramina, have been described by J. D. Long (*Journal A. M. A.* August 27, 1910). This encroachment upon the nerves at their exits accounts for much of the rheumatic and neuralgic pain.

6. *Special Organs*.—Nothing specific.

7. *Lymphatic*.—The lymph nodes, especially of the abdomen, may be enlarged. The spleen may show fatty degeneration.

8. *Gastro-Intestinal*.—Atrophy of the

degeneration has been reported. Urine negative.

10. *Respiratory*.—Pleurisy has been reported. The lungs apparently are not often affected.

11. *Muscular*.—The muscles undergo marked atrophy and wasting (cachexia) and gangrene (decubitus) has been seen.

CASE I. (Being reported clinically by E. L. Eggleston.)

*Clinical Diagnosis*, pellagra (acute), course



#### INTESTINES UNOPENED.

- A. Distended lower duodenum and jejunum.
- B. Cystic diverticula from upper jejunum.
- C. Contracted ileum.

- D. Distended and dilated caecum and colon.
- E. Appendix, showing angulation near distal end.

muscular walls of the intestine and ulcers of the colon have been seen. All the abdominal organs tend to atrophy. The liver shows fatty degeneration. Catarrh of the gastro-intestinal mucosa.

9. *Genito-Urinary*.—The kidneys may show parenchymatous degeneration. Fatty

two months. Died June 15, 1910, at 3 A. M. Autopsy at 11.30 A. M.

#### PATHOLOGICAL FINDINGS

##### (a) *External Examination*:

Subject is apparently about sixty years old. Markedly emaciated—no scars of interest. Rigor mortis is complete. Hypostatic congestion on the back. The skin over the hands shows marked

thickening of the stratum corneum. Scales from bran size to size of cent can be easily lifted from the fingers. The neck shows a band of thickened, wrinkled and brown pigmented skin—complete except over and posterior to the left sternocleido-mastoid. This band is 1 to 1½ in. wide. There is no panniculus adiposus—the abdomen slightly retracted.

(b) *Internal Examination:*

1. *Head.*—No permission was obtained to examine the brain and cord.

2. *Thorax.*—a. *Left Lung* complete and firm

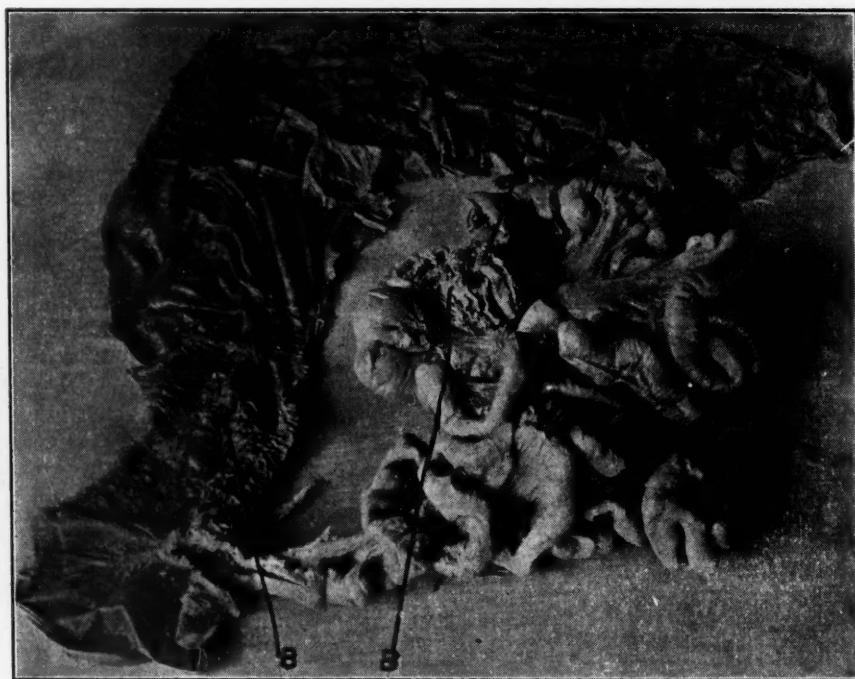
coating. Mucosa appears more red than normal post-mortem.

b. *Thyroid*, normal.

4. *Abdomen.*—Stomach and intestines in normal position. Omentum lying downward over intestines.

a. *Stomach*, dilated, the prepyloric sphincter is contracted showing the physiological division.

b. *Small intestine:* 1. Duodenum, normal. 2. Jejunum, relaxed and distended with gas; 10-15 scars or diverticula appear along the mesenteric side of the upper jejunum. These vary from



INTESTINES OPENED.

- A. Cystic diverticula and opening into one of the largest. These appeared like congenital formations.  
B. Smooth (non-ulcerated) condition of the intestinal mucosa.

pleural adhesions from the apex to the fourth rib and over the diaphragmatic surface. One indurated mass palpated in the apex (size of walnut).

b. *Right lung*, one band of firm adhesion binding the left anterior inferior corner of the lung to the diaphragm. Thickened pleural area (size half dollar) on anterior surface of upper lobe. Pleural scar on posterior surface of upper lobe. Anthracosis. No consolidation discovered.

c. *Great Vessels*—negative.

d. *Lymph Glands.*—Bronchial glands filled with black pigment.

3. *Mouth and Neck.*—a. *Tongue*, slight gray

size of pea to yolk of egg. 3. *Ileum*, empty and in state of hypertonic contraction.

No signs of ulcers outside or found later on section.

c. *Appendix*, retrocaecal pointing upward and inward. Three-fourths in. from distal end has an acute angulation (60%) which persists. No evidence of scar or adhesion. Otherwise normal.

d. *Cæcum*, distended and filled with pultaceous material.

e. *Colon:* Dilated to the middle of descending portion; contents gaseous and fluid. No ulcers were to be discovered along the colon or cæcum.

f. *Sigmoid and rectum*, in a state of marked contraction, empty and not ulcerated.

g. *Mesentery and Omentum*, lymphodes are enlarged but not hardened.

h. *Liver*, quite soft, looks paler than normal, fatty degeneration.

i. *Gall bladder*, quite large, filled with bile, no stones, one old scar on fundus.

j. *Pancreas*, normal.

k. *Spleen*, normal.

l. *Left kidney*, many small cysts showing on the surface and cut section. Renal substance thinned.

m. *Right kidney*, similar.

n. *Suprarenal bodies*, normal, perirenal fat very scant.

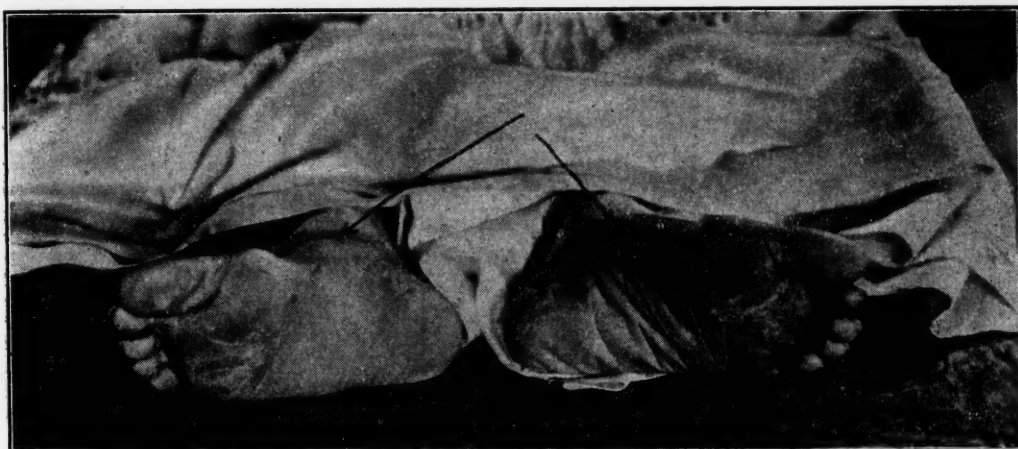
5. *Pelvis*.—Organs palpated and observed, but not removed. All negative.

ning of the muscle coats, the other shows an apparent thickening due to the hypertonic contraction of the intestine. The mucosa shows evidence of a catarrhal enteritis.

7. *Colon*.—No ulcers were to be found. The slides show a catarrhal colitis.

8. *Kidney*.—Cystic areas. Parenchymatous degeneration and fatty degeneration.

CASE II.—The peculiar interest in this case lies in the fact that it is, so far as I have been able to learn, the first case of pellagra to find its origin in Michigan. The case ran an acute course such as the so-called "typhoid pellagra." The duration, however, was over twice as long as Case I (E. L. E.), and showed one typical period of abatement of symptoms. The onset was about April 1, 1910, and the demise September 18, 1910, five and one-half months. Recovery from acute



Feet, showing marked dermatitis at time of death. The upper border shows very plainly. Cutaneous Flakes. Showing nature of scales which were repeatedly cast off from the hands and feet.

#### MICROSCOPIC EXAMINATION

1. *Heart*.—Pericardium slightly thickened. Muscle cells pigmented. Fatty degeneration seen in areas. Muscle cells appear somewhat atrophic.

2. *Liver*.—Fatty degeneration in small areas. There is a diffuse deposition of small, dark brown granules. Around the central veins there is a collection of larger masses of light brown pigment.

3.—*Lungs*: (a) Thickened pleura. (b) Areas of partial atelectasis. (c) Area of connective tissue proliferation apparently an old scar; non-tuberculous. (d) Areas of partial consolidation and round cell infiltration.

4. *Thyroid*, negative.

5. *Mediastinal Lymph Node*, negative except for black pigmentation (anthracosis).

6. *Small Intestine*.—One section shows a thin-

ning of the muscle coats, the other shows an apparent thickening due to the hypertonic contraction of the intestine. The mucosa shows evidence of a catarrhal enteritis.

*Clinical Review*.—Mrs. X., twenty-five years old, married, housewife, American born, resident in Michigan for seven years or longer, never been South of Ohio River, nor out of Michigan in past seven years.

*Family History*.—Father (age fifty-four) and mother (age fifty-three) alive and well. Has six sisters all well; one sister died in infancy. Has two brothers, both well. Has two children (age four and two years), both well.

*Personal History*.—No severe diseases in childhood. When six years old she fell on to a chair post and suffered an injury of the vagina, which required surgical repair. Had leucorrhea quite



constantly ever since, and has never been strong or robust like her sisters. Has had several attacks of tonsillitis in past few years. One and one-half years ago she had reparative operations, perineorrhaphy, colporrhaphy, trachelorrhaphy, and the shortening of the round ligaments.

*General Habits.*—Having never been strong, her work has been rather heavy. Nothing but care of children and light housework, no worry out of ordinary, simple mixed diet. (Later inquiry elicited the information that she never used corn meal.)

*Present Illness.*—Has not been as strong as formerly any time since her operation. Last December she weighed 110 pounds. Normal 115 pounds. She gradually lost to 96 pounds in March, 1910. Her appetite failed, she became weaker, and suffered from persistent constipation.

She consulted a second physician, who said he did not know what it was, as he had never seen anything like it. He prescribed a sedative lotion, which seemed to cause an improvement. He changed his treatment to a powder. The skin soon cracked and pus appeared in the cracks.

About May 25 her throat and mouth became sore and persisted.

On June 9 she came from Northern Michigan to Battle Creek. At that time she had sore mouth and throat, with mild degree of salivation, proctitis and vaginitis with creamy discharge. The day after she came she used some laundry starch in washing, and thought it made her hands much worse. She says she always had an idiosyncrasy for laundry starch. Every time she used it her hands became red and rough.

A vigorous laxative was given at this time to



Hands, showing same. Thickening of epidermis, smooth skin on side of arm, showing border.

After Easter (early in April), her hands became quite generally "chapped." She thought this due to Easter dyes.

A few days later a red spot, size of half dollar, appeared on right forearm. She said it came on suddenly,—was not visible in forenoon but was noticed in afternoon. It reminded her of a sting; the surface was smooth. The eruption spread upward to elbow and down to finger-tips in two weeks. The same process then appeared on the left arm. She used some home lotions and ointments for a few days, and then consulted a physician. He pronounced it an eczema, and thought it would soon clear up.

combat the persistent constipation. This ushered in a prolonged attack of diarrhea,—six to thirty movements per day, foul, fluid, with mucus flakes.

About June 15 I saw her in consultation. At that time vesicles appeared between the fingers and over the backs of the hands. Simple ulcers on a red mucosa dotted the mouth. I concurred in a diagnosis of *dermatitis venenata*.

On June 17, the case was turned over to my care. Treatment for dermatitis venenata was continued.

The vesicles became pustular. An examination of the pus from the pustules, mouth and vagina showed pyogenic bacteria (cocci). A

vaccine was produced from the cultures. Under the vaccine (five injections at two day intervals) the pustules and vaginal discharge rapidly dried up and the mouth improved. The throat became practically non-sensitive. The diarrhea, however, became worse. Ptosis to a slight degree appeared about this time. She was extremely hypersensitive to artificial heat.

On June 20 her weight was eighty-four pounds and she was extremely weak. At this time a positive diagnosis of pellagra was made. Her weight sank to less than seventy pounds before death. She complained of nearly constant headache,—aching at the back of head and neck and dizziness upon standing or sitting upright.

We tried many of the recommended remedies, atoxyl, 1 gr. daily, Fowler's Solution, intestinal disinfectants, tannogen, beta-naphthol, bismuth subcarbonate, charcoal, sodium bicarb. calendula, and later (August 27) the anti-amœbic treatment suggested by J. D. Long in the *Journal A. M. A.*, August 27, 1910 (quinine rectal injections, salines and mercury and iodids alterative treatment).

By July 1 she had become so weak that she was ordered to bed. With only a short interval she remained in bed until her demise.

About this time the similarity of the bowel symptoms to those in typhoid impelled us to try a liquid low proteid diet. The extreme fetor of the stools, the frequency of movement and her general feelings improved. After a few days we introduced egg white and other proteids into her diet, and the foul odor and toxic symptoms reappeared. The antitoxic liquid diet was resumed. She complained of burning pain in the epigastrium (pyrosis) quite frequently. Her bowels moved as frequently at night as during the day. Later her bowels moved without warning involuntarily.

By keeping the hands covered and thus excluding the light, the dermatitis began to subside.

During the next three or four weeks she complained of passing spells of feeling "awful." Nothing could be observed by her attendants. Her description was one of fear, oppression, something about to happen. When interrogated in the interval she said she had nothing to fear, but couldn't help the spells. These periods varied in length and frequency. Her disposition showed some tendency to change toward depression and discouragement (not over her own disease).

She suffered with insomnia. Bromidia did not relieve. Neither did potassium bromide. Veronal (gr. X) did. Later trional was used with

good results. Her mouth remained fairly clean, not showing anything like typhoid sordes. She suffered about August 1 with hiccoughing and vomiting two to five times daily for a period of ten days. The hands and arms were entirely clean, having desquamated several times. The skin was smooth, fairly soft, but remained somewhat pigmented. The dermatitis appeared, however, on both feet, the right side of the neck, the bridge of the nose, and under both eyes.

Early in August her bowel symptoms improved. Her appetite, feeling of strength, disposition and nervous symptoms also improved. She began to sit up, to take a few steps, and later to walk out to the table for meals. She was allowed only a very little solid food—as baked potato, rice and toast.

Her finger nails during the earlier weeks (June 9—July 15) began to show an increasing white growth (lunula). During the period of improvement (July 28—Aug. 15) new growth took on the normal transparent appearance. With the return of other symptoms the new growth again became opaque (white), giving the nail a striped appearance.

Her appetite again failed (August 15) and she returned to bed. She soon entered the final stage, one of cerebral (cortical), bulbar and cord irritation, resembling in some respects tetany and uremia.

The mental symptoms ranged from depression and melancholia to irritation and mania. These symptoms appeared paroxysmally, varying in frequency and duration. One whole day without cessation she raged in delirium, suffering delusions and hallucinations. Again she would scold her attendants for one or two minutes, and then apologize in the lucid interval. She knew what she did, but could not behave, so she said.

The motor symptoms of fibrillary twitching, intentional and unintentional tremors, tonic and clonic spasms, involved at various times the muscles of the entire body. At one time she would suffer facial contortions, or torticollis to left, right, anteriorly or posteriorly; at another time the muscles of respiration or forced respiration, very similar to the breathing of tetany, or at times like the breathing in uremic convulsions. Again the diaphragm would contract spasmodically; again the muscle groups of back, arms and legs. The gross spasms of the arms (for instance) were easily controlled, as a rule, by grasping the hand and elbow. Meantime, however, a constant tremor could be felt affecting all the fibres of the muscle group. This could not be controlled

except by opiates, and even then not completely at times. Tendon reflexes were exaggerated.

Her sensory symptoms were few. She complained of her ankles paining, of general soreness, of burning in the affected skin areas, and of extreme hypersensitiveness to heat. She thought even warm water was about to scald her. Cold felt grateful to her skin in general.

About September 1 her mind cleared and she did not suffer the mental symptoms again until September 10. The motor symptoms, however, were much worse. She had been quite talkative up to this period. She did not resume her loquacity in this quiet spell. She would remain dumb even when a simple question was repeated several times.

Her pulse was constantly rapid, 90-130. It was fairly full and regular up to September 6. After that date it was often thready. Heart and lungs negative. Her temperature curve was practically normal. No blood appeared in the stools.

At this time (September 1) the eruptions of the hands and feet, the sore mouth and throat and diarrhea reappeared.

By September 10 she became irritable again at short intervals. On September 11 she quieted down mentally. There were few mental outbursts, though she was seldom rational from that day forward. During the week her pulse ran thready, her muscles remained rigid, and the fibrillary tremor continued. Her lungs gave evidence of retained bronchial mucus and edema. She suffered an occasional respiratory spasm, followed by a short coughing spell. Her bowels became very tympanic. She died at 10.30 A. M. September 18.

As cerebral sedatives we resorted to potas. bromid., bromidia, chloral hydrate, veronal,

trional, codeine, heroin, and morphine at various times.

Dr. A. S. Kimball, city health officer, Dr. A. W. Alvord, Member of State Board of Medical Examiners, several other local physicians, and three visiting physicians from the South saw the case in consultation. No autopsy was granted.

Several laboratory examinations of urine, blood and feces were made between July 1 and September 10. The essentials were as follows:

*Urine:* Quantity, 800-1000. Specific Gravity, 1017-1020. Total solids, 30-40 gm. Acidity, 1.20-1.50 (gm.  $H_3P_4$ ). Urea, 14-18 gm. Chlorides, 7-9 gm. Indican, 100-128 (Folin scale). Indolacetic acid, xx. Diazo, negative.

The thing of interest is the indican and indolacetic acid reading,—the great quantity indicating excessive intestinal putrefaction. The microscopic findings were negative.

*Blood:* Hemoglobin, 80-90%. Red Cells, 81-88%. White Cells, 90-120%. Small lymphocytes, 25%; large lymphocytes, 4.5%; polymorphonuclear neutrophils, 68.5%; eosinophiles, 1.7%; nothing out of the ordinary.

*Feces:* Daily amount could not be computed. Foul odor. Mucus shreds. Indol 5-7 m. gms. Bacteria, 3,316,150,000,000 (one count) per gram. Gram positive, 26.4%. Gram negative, 73.5%. Undigested food remnants. Bodies resembling ameba, but not showing typical movement. Occult blood test negative.

In the feces, the immense bacterial count, the large number of gram positive bacteria and the high content of indol are all significant of the source of toxin.

The observation of bodies resembling ameba is interesting, though it is to be regretted that a more positive laboratory conclusion could not have been reached.

#### PELLAGRA AS WE SEE IT IN ITALY. OLD AND NEW THEORIES, WITH REPORT OF CASES SEEN IN NEW YORK CITY

A. Caccini, New York, states that pellagra is not infrequent in the United States at present, and in some ways differs from the disease as seen in Italy. In the United States its course is more acute; in Italy it is more chronic and the erythema is much less marked. Sporadic cases have been seen in this country for a long time, and lately it has been spread widely in different States, assuming an epidemic character. It is relatively frequent in this country among the well-to-do classes, while in Europe it is limited to the poor farming population. Its essential cause is still unknown. One should not hastily discard the old theory

that it arises from fermentation of corn, while one should look carefully into the newer theories as to its origin from a protozoon or other form of parasite. The author gives histories of eight cases seen by him in New York among foreigners, all of which had a very chronic development. He gives a careful consideration of the newer theories, and the pathology and symptoms of the disease as seen in Italy and in the United States. There is a typhoid form of the disease. The insanity is of the depressed type with suicidal tendency.

—*Medical Record*, March 11, 1911.



## PELLAGRA\*

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The diagnosis of a well-developed case of pellagra is not difficult. With the cutaneous, gastro-intestinal and nervous symptoms well developed, a clinical picture is presented which is so characteristic that no one should fail to recognize it. In the earlier stages, particularly when the cutaneous manifestations are not marked, it is very difficult to make a positive diagnosis. In two of the cases which I wish to report, when the cases first came under my observation I failed to make a diagnosis of pellagra, although the later developments fully justified such.

CASE I. J. G., a man sixty-seven years of age, came under my observation May 5, 1910. The patient's home was in Linden, Wis., a locality in which one would hardly expect to find this trouble. The patient gave the following history:

His father died at the age of seventy-seven, of general debility; mother died at the age of forty, of cholera; two sisters died about the age of forty-eight, one of acute articular rheumatism and cardiac complications, and one of trouble incident to the climacteric; one brother died at the age of sixty-four, of Bright's Disease. The patient was rather frail as a child, but suffered from no serious illness; had an attack of rheumatism about the age of twelve; no history of venereal troubles. His occupation until 1880 had been that of a farmer, during which time he lived almost entirely in the open air. From 1880 to 1890 he worked in zinc mines. Had always

been careful in regard to his habits, using neither liquor nor tobacco; his diet had always been abundant, and he had used meat quite heavily, eating it three times a day; used very little, if any, corn meal.

Two years ago his digestion became disturbed and he was annoyed by the formation of a large amount of intestinal gas; also noticed at the same time that his strength was below par. These symptoms developed in the early spring of 1909. During the later summer months and the winter of 1909 he made some improvement, but at the beginning of spring 1910 he complained of feeling very tired and had a great disinclination to work. About April 1st the backs of his hands became red and swollen; there was but little irritation, and this was of a burning nature not accompanied by pruritus. About the same time he noticed a looseness of the bowels, having from one to four loose movements a day. His appetite was very poor. Coincident with these symptoms he became somewhat depressed mentally, although naturally of a very optimistic temperament.

Physical examination: The patient was markedly emaciated, of a sallow complexion, marked erythema and swelling extending from the wrists to the ends of the fingers on the dorsum of the hands, the erythema ending abruptly at the wrists. The skin over the dorsum of the hands was thickened and somewhat fissured. The tongue was red and in spots seemed to be denuded of mucous membrane. Patient complained of the irritation incident to mastication of food. Examination of the lungs was

\* Read at the Forty-fifth Annual Meeting of the Michigan State Medical Society, Bay City, September 28, 29, 1910.

negative. Cardiac sounds were weak. Abdomen markedly retracted; visible peristalsis observed over the greater portion of the abdomen. Succussion sounds were elicited over the stomach and cæcum. Stomach was greatly dilated, lower border being  $2\frac{1}{2}$  inches below the umbilicus; cæcum was dilated. The analysis of the blood was as follows: Hemoglobin, 95%; red cells, five million per cu. m. m.; white cells, nine thousand per cu. m. m.; systolic pressure, 140; diastolic pressure, 105; pulse, 78. The examination of the feces was negative as to ameba. There was considerable mucus and pus present. Urine analysis negative.

From May 5th until June 1st patient made very satisfactory improvement, being able to spend the greater part of the day in the open air. His appetite was good and he ate quite heartily. He had from one to two bowel movements per day of rather a loose character, but scarcely of a diarrheal nature. About June 1st bowel movements increased to four to six movements per day, of a very loose character. Coincident with this his appetite became very greatly deranged, and would occasionally be troubled with nausea and vomiting. From this on it seemed impossible to relieve him in any way, and his strength failed very rapidly. Patient died on the 15th of June. During the entire time he was under my observation there was no rise of temperature, the temperature usually being about one degree sub-normal.

CASE NO. 2. Mr. A. S. C., whose home is in Louisiana, first came under my observation in July, 1907, giving the following history: Father died at fifty-four years, as the result of an accident; his mother died at sixty years, unknown cause, death occurring suddenly when she was in bed. Patient has two brothers, one living, seventy-two years of age, enjoys good health; one died of cancer. Has four sisters, two in good health, one at present suffering from tuberculosis; one

died of dysentery at thirty-six years. As a child and young man the patient was strong and vigorous. Some years ago had a slight attack of rheumatism in right shoulder. Has been a moderate user of alcoholic beverages. His diet has been plentiful, and has been only a moderate user of corn products; has used meat freely. In July, 1905, was attacked suddenly by diarrhea, which lasted for about ten days. Later on during the season there was an occasional recurrence of this trouble, which was accompanied by a great amount of pain in the abdomen, excessive amounts of gas. During the winter the patient made considerable improvement, but with the approach of warm spring weather his trouble reappeared in 1907. At the time he came under my care in July, 1907, he was considerably emaciated, but the intestinal condition was much improved, there being only two passages a day and but very little pain. During the height of his diarrheal trouble the patient passed considerable blood and much mucus. The patient's weight at this time was  $117\frac{1}{4}$  pounds. Heart and lungs negative. Stomach moderately dilated; lower border at the umbilicus. Tongue was very red and raw in places. Patient complained of excessive amount of saliva, and considerable pain when masticating his food. Had been very weak for some months. Appetite poor.

Patient was under my observation from July 26th until October 1st, during which time he made very satisfactory improvement and gained several pounds in weight. Bowels were in a quite normal condition, and the patient apparently was free from trouble. He returned again in July, 1908; had been in good condition all of the preceding winter, but with the advent of spring his old symptoms had returned, such as weakness, inaptitude, looseness of the bowels, and stomatitis. Under treatment he improved very satisfactorily again, and

I did not see him again until in June, 1910. During 1909 he had a somewhat similar experience to that of the preceding year, but not so severe. During the spring of 1910 there was a very marked recurrence of the gastro-intestinal symptoms, with a cutaneous erythema over the backs of the hands. He came under my observation in June of 1910, at which time careful examinations of the stools were made, but no ameba or other protozoa found. The patient was very weak, the diarrhea was almost uncontrollable except by opium, and the appetite was very much below par. He was under my observation from the 17th of June until the 14th of August, during which time he failed to make any permanent improvement.

During my previous experience with this man I found a red cell count as low as 2,750,000 per cu. m. m., but after relieving the gastro-intestinal symptoms the blood would always very readily improve. This year the red cell count was as low as 2,000,000. In some respects the case quite closely resembled a case of primary anemia, and had it not been for the cutaneous manifestations and the chronicity of the disease and the absence of the peculiar blood findings of pernicious anemia, I should have been inclined to have diagnosed it as such.

CASE No. 3. This patient, a physician thirty-eight years of age, gave a negative family history. His history was also negative as to his early life. For the past few years his nutrition had been somewhat below par, and he suffered considerable from gastrectasis. About six years ago he changed his place of residence from Michigan to Chattanooga, Tenn. After a couple of years' residence there he found that each spring, with the advent of warm weather, he would feel very greatly debilitated, and would have to give up his work for a few weeks, during which time he suffered more or less from severe dyspepsia and

alternating attacks of constipation and diarrhea. By summer he would have recovered his health sufficiently to take up his practice again. Each year the symptoms returned in a more aggravated form. For the past two seasons there have been marked cutaneous symptoms, the erythema affecting principally the dorsum of the hand, giving a glovelike effect, and marked stomatitis with excessive salivation. During the last attack he showed very marked mental symptoms. As soon as he was able to travel he was brought North, and the change seemed to be very beneficial. After a few weeks' rest his appetite returned, he gained some ten or fifteen pounds in weight, and all of the peculiar symptoms of the disease disappeared.

CASE No. 4. J. S. T., male, fifty-eight years of age, farmer by profession, a resident of Kentucky, who gives a negative family history, and whose condition of health during his early life and up to the age of fifty-four was all that could be desired. In the spring of 1907 he was annoyed considerably by distress after eating, the symptoms being a feeling of epigastric fulness, and distension, accompanied by eructations of sour material coming on a quarter to an hour after eating, attacks of constipation alternating with diarrhea, no nausea nor vomiting.

In 1908 gives history of edema of face, abdomen and extremities, which disappeared under the administration of purgatives and diuretics. No edema since that time. Since that time has suffered a progressive loss of weight and strength; is now between sixty and seventy pounds under usual weight. At the time of my first examination in May, 1909, I found the patient to be suffering from malnutrition, weight 142 pounds, muscles flabby and wasted, edges of the tongue and tip very red and apparently denuded of mucous membrane, skin dry, rough and inactive. The exam-



ination of the lungs showed prolonged expiratory murmur at both apices. Right lung posteriorly showed some dulness on percussion and diminished breath sounds. Heart sounds were weak and distant, no murmurs. Abdomen showed spasticity of both upper recti, more marked on right side. Liver in anterior axillary line extends from sixth rib to one inch above costal margin on a line midway between parasternal and right mammary lines, dulness extends to two fingers' breadth below margin of ribs. Palpation at Mayo-Robson's point, and externally to this point under ribs elicits marked tenderness; reflexes normal.

The urine examination showed no pathological conditions. The blood report showed moderate anemia,—hemoglobin, 75%; red cells, 3,000,000; white cells, 5,500 per cu. m. m.; systolic pressure, 120; pulse, 72.

Patient made a very rapid improvement and returned to his home on June 10th, having gained twenty-one pounds in weight and feeling better than he had for two years.

Patient returned again on the 9th of June, 1910, giving a history of having had an attack of grip in January, from which he made very unsatisfactory recovery. With the advent of warm weather the digestion became very markedly impaired, appetite poor, with a very obstinate diarrhea. At this time the urine was again negative, with the following blood analysis: hemoglobin, 83%; red cells, 3,100,000; white cells, 4,500 per cu. m. m.; systolic pressure, 100. He lost all of the weight which he had gained the former year and was very weak. Careful examination of the feces failed to reveal any blood or protozoa. The stool was of the consistency of pea soup, very copious and from three to six movements per day. At this time the patient's tongue was in so sensitive a condition that it was almost impossible for him to eat anything except liquid foods. His tongue had

the appearance of raw beef. The hands still showed a moderate degree of erythema. The patient was under observation from June 9th until August 20th, during which time he made only slight improvement. At this time he returned to his home in Kentucky. I have since heard that he is gaining slowly.

I report three of these cases, Nos. 2, 3 and 4, as it seems to me that they are of interest in that they were suffering from a malady which it was impossible to diagnose as pellagra until after the disease had progressed for some two or three years, but we find in each case a tendency for the trouble to come on in the early spring and to subside after a few weeks, and the patient be fairly comfortable until the following spring, when there would be a recurrence of the symptoms in a more severe form. After two or three recurrences the symptoms were very characteristic of pellagra.

Since pellagra in this country is not limited to the South, and since the most aggravated case which I have reported, and which lived only a short time, had never lived in the South but had resided in Wisconsin,—a state from which there have been very few cases reported,—it seems to me that we should be careful not to overlook cases of this kind. Moreover, while it may not be possible to make a diagnosis of pellagra previous to the skin manifestations, it seems to me that, given a case in which the symptoms appear in the spring, such as digestive disturbance, diarrhea alternating with constipation, stomatitis, great languor and weakness, that we should at least be very suspicious that the case would develop into pellagra.

Another interesting point in the cases I have reported is that in three of the cases, cases 1, 2 and 3, but very little corn was used as food. All of the cases had been well fed, there being no history of meagerness either in the quantity or quality of

food. In these cases a very tenable hypothesis would seem to be that there was a toxin, probably developed in the intestinal tract, which was responsible for the constitutional symptoms.

As to treatment, but very little of a specific nature can be said. The treatment must be directed toward improving the general nutrition. Where the ameba is present, and from the reports it seems to be present in a large number of cases, the usual treatment for amebic dysentery must be instituted, such as the quinine sulphate injections or peroxide of hydrogen. For the general malnutrition and anemia, arsenic has been used with only moderate success. No drug has yet been discovered

to have any very marked effect upon the trouble. A change of climate and nutritious diet is apparently of more value than any other line of treatment.

Some observers have reported great success by transfusion, using the blood of a pellagrin that had recovered. It would seem from this that where recovery occurs an antitoxin is elaborated which has a very specific effect. A sufficient amount of work on this line has not been reported, so definite statements cannot be made as to this form of treatment. In Italy, where the disease has existed for a great many years, so far no serum treatment or other line of specific treatment has been discovered which might be considered a cure-all.

#### DISCUSSION ON PAPERS OF DRS. EGGLESTON AND COLVER

DR. JOHANN FLINTERMAN, Detroit.—I would like to ask the Doctor whether any symptoms of neuritis, any pain running the course of the trunk nerves appeared, and whether it was manifested by some skin symptoms and intestinal symptoms, and whether there were other symptoms. Cases have been described where there was a manifestation of some skin affection, at the same time combined with very severe diarrhea and perspiration. I would like to know from the Doctor whether in those cases there were any symptoms of neuritis and trunk or vaso-motor disturbances.

DR. CHURCH, Marshall.—I would like to know whether any of these cases got well,—whether any have been cured or not.

CHAIRMAN SMITHIES.—It might be well to ask whether the Wassermann reaction was used in any of these cases, or a blood examination made.

DR. EGGLESTON (closing).—It would take an hour or two to present the case properly. It is impossible to give you very much of an idea in the time which I have had.

With reference to pain, in one case which ran a very short course and died, the patient complained of no pain whatever, and there was no rise of temperature any time, but there was sub-normal temperature during the course of the disease. The clinical manifestations are so different in different cases. Very frequently, where the nervous system seems to be particularly

affected, there may be a great deal of pain. The case reported as originating in Michigan had a great deal of pain in the back of the head and neck, and complained considerably of headaches.

As to the prognosis, two of the cases died. Of the other three cases, one of them seems to be in very good condition, a case which it seems to me might recover, although there have been two recurrences of the disease. The other two cases are certainly getting worse, and will not live very long. The mortality at present is considered to be about 35%. That doesn't mean that the rest of them get well. It is a disease that runs a long course sometimes. Some observers think about one out of every five gets well.

I may say that the Wassermann reaction was not tried in any of these cases. The blood was examined frequently, a blood count made, and there was a moderate degree of anæmia in each one of the cases, not very marked.

There is one point which I wish to leave with you, and that is this, that when a case comes to you, I don't care whether it is from the South or not, if there is a complaint each spring of a feeling of great debility, loss of appetite, stomach disturbance and diarrhea, it should be watched very carefully. A great many of these cases appear in the North, many of them in Illinois. They are not limited to the South, and by keeping these points in mind you will not miss your diagnosis very often.

## CHOREA MINOR\*

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My object in bringing this subject before the Medical Society is to show how very prevalent chorea is. There is hardly a day without a case of chorea coming into the clinic, and they are just as common in private practice. Text-books and literature treat the subject all too meagerly.

What is chorea? This is invariably answered that it is not a disease. Chorea is a symptom. While it is true that the prominent symptom in the disease which we call chorea is the choreic motor disturbance, and that chorea known from the Greek word, a "dance," is loosely applied to many affections of the nervous system, chorea minor is an acute self-limited infectious disease in children and young people, related to rheumatism and characterized by spasmodic nervous symptoms. Such authorities as Wallenberg and Heubner would like to substitute the name infectious chorea.

The common name, St. Vitus dance, with which the laity is associating chorea, is urged by many authorities to be discarded. St. Vitus dance is an hysterical affection which bears no association to the disease which Sydenham so well described in 1686 as chorea. St. Vitus dance was originally applied to epidemics of maniacal dancing, which occurred back in 1374 at Aix la Chapelle. It was a religious belief, attacked large numbers of people, and travelled all over the country, and prevailed throughout Germany in the fifteenth century, and from that time until Syden-

ham gave us the description of the disease all forms of hysteria were classed with what we now call chorea.

Chorea affects children between the ages of five and fifteen years, usually, as a rule, in bright, precocious children, and the largest number occurs between seven and thirteen years. Why? Because seven to thirteen are the years during which the child goes through some of the acute infectious diseases. It is also the time when the child is usually at school and when the tax upon the mind is great. Heubner says: "Choreic movements are mimic, no case under three or four years, because it cannot occur in a child that has not learned to speak in pantomime, in whom, therefore, the corresponding nerve centres are not in function and cannot be placed in a state of infection by the toxic processes."

Chorea is attributed more to girls than to boys. Leonard G. Guthrie says, in his textbook, "Chorea affects girls three times as frequently as boys." But a larger number of boys than girls are attacked between the ages of five and ten, while more girls than boys are affected between ten and fifteen. It has been our observation that in dispensary practice especially boys are more frequently affected than girls at all ages.

With regard to the season of year, we find chorea more frequent in the spring,—March, April and May. Here, again, the two contributory factors being either overwork in school at the close of the season, or passing convalescence from some acute infectious disease.

It is said that neurotic children are more

\*Read before the Wayne County Medical Society, December 5, 1910.



liable to attacks of chorea than others, and it is apt to be a disease of civilization, and for that reason it is said that negroes in the warm climates never suffer from chorea, while Jewish children, on the other hand, are very frequently subjects of it. While from our observation it is true that it is rare in the negro child, it is also true that it is no more common in the Jewish child than in any other nationality.

A history of rheumatism in the patient or in the parents was present, upon close inquiry, in almost every case. Frequent attacks of tonsillitis, endocarditis and a neuropathic history was gotten in a very large percentage of cases, so much so that a definite relation has been established between our cases of chorea, rheumatism, endocarditis and chronic infectious diseases, and in view of this it has been my great pleasure to hear such a clinician as Prof. Heubner say, "Chorea is a rheumatic equivalent, as the localization of rheumatic infection is in the nervous system."

About the relation of chorea to rheumatism and diseases of the heart, it may be said that in a large percentage of cases of chorea, cardiac inflammations become manifested which, at first, may only be a functional systolic apex murmur, but sooner or later, if the case is followed up, we have an accentuated second pulmonic, and the condition can only mean an organic endocardial disease.

Post-mortem, in a great many cases of chorea, has shown death to have resulted from an endocarditis, with such minute deposits upon the mitral valve that they have not given enough symptoms during life to call attention to the heart.

All the latest literature upon chorea mentions the fact that the percentage of cases of chorea that have had, or developed during the attack or later, attacks of rheumatism, is too large to be only a coincident, and we must take the view of Heubner,

Myer and others that the rheumatic joint pains, accompanied by depression, malaise, must be rheumatic infection. The authorities warn us that in the prognosis of chorea we must take these conditions into consideration. The complication of pericarditis or endocarditis may terminate our case fatally. In a study of ninety-six cases reported by Czerno, Schwartz and Lunz (in "Jahrbuch fur Kunderheilkunde," 1905) these authorities find a very close communication between acute articular rheumatism, endocarditis and chorea. This combination of trio was seen in 62% of their cases.

The relationship between chorea and rheumatism and cardiac manifestations has been held in France for a good many years. It has been accepted by the best authorities in England and Germany, and writers in our own country are beginning to agree that they are all manifestations of the same disease.

Of course a good many clinicians claim that chorea can be traced directly to acute rheumatism in a very small percentage of cases.

Sturges mentions, I believe, only 5.8%, but this is only chorea directly due to arthritis. He admits recurrent tonsillitis, muscular tenderness, so-called growing pains, were common in his cases of chorea, and, were such symptoms taken into account, the percentage of chorea of a rheumatic origin would be largely increased. And in taking histories of our choreic patients we must not be satisfied with the negative findings of articular rheumatism, but we must make a careful examination of heart, throat, and joints, and particularly ask the patient and mother in regard to growing pains and muscular pains, and our percentage of cases of rheumatic association with chorea will be a great deal larger. No clinician expects the same clinical picture of rheumatism in a child that he sees in an adult.

It has also been shown that while signs of rheumatism may be absent before and during an attack of chorea, it may subsequently develop. Of 115 children suffering from chorea in the great Ormand Street Hospital for Sick Children, Dr. F. E. Battu found rheumatism in 32%. But, following up the cases that had not suffered from rheumatism, he found that 11.3% developed rheumatism three years later, and 9.7% developed rheumatism within six years of chorea. This shows that statistics referring to rheumatism in choreic patients would be a great deal larger if the subsequent histories of the cases could be followed.

Reflex causes of chorea have, in the past, held a high position as an etiological factor. At present, while it is true that such reflex etiological factors have not entirely lost their place, we are glad to see that they have lost their old-time importance in the opinions of most clinicians. It is undoubtedly true that a good many of these reflex causes will bring on an attack of chorea in a child so predisposed by a hereditary weak nervous system and by rheumatic infection. Reflex causes that we meet in histories of chorea are fright, grief, over-exertion both mental and physical, emotional disturbances, over-pressure at school, traumatism, errors of refraction, adenoids, worms, genital irritation, phimosis, vaginitis, etc., and a good many more could be mentioned.

In all cases we have found such a reflex cause, which was easily taken by mother and physician as the true cause of chorea, but it was not so. To illustrate only one instance: Mam. K., twelve years old, was taken sick four months ago, while I was away. Was taken to physician, with the following history: Child has been perfectly well until a day before this onset of choreic movements. She was taken by her mother to see her aunt, who died a day before. Coming home from this sight of dead body

and surroundings, the child was taken sick with a violent attack of choreic movements. Physician was consulted. Both physician and mother were satisfied as to that being the cause of child's chorea. This child has passed, in the last five years under my observation, two attacks of acute articular rheumatism and several attacks of tonsillitis. She has an endocarditis, and I saw her less than a month ago with tonsillitis, and of course the persistent chorea. This, I learned, was not told the physician, and if this case has been reported by the physician it would have been reported as a case of non-rheumatic chorea due to fright.

I could cite many more cases with more trivial cause for chorea, where seeing a runaway or an accident of some kind, fire, or punishment in school, child left in dark room, administration of an anesthetic, have evidently produced chorea, but it was always upon a child either rheumatic, having an inherited rheumatic tendency, or an unstable nervous system.

For a great many years I have followed chorea cases that I have thought were due to reflex causes. A good many of them where errors of refraction were corrected by oculists at my request; a good many where tonsillectomies, operations for removal of adenoids have been performed; a great number have been circumcised; but I have yet to see the case in which the removal of the reflex cause alone cured the chorea, and this is not only my own experience, but I have asked three ophthalmologists of wide experience and two prominent laryngologists, and these gentlemen do not know of a single case in their experience where a cure was produced by removing the reflex cause mentioned. It is true that a shock of an anesthetic, or otherwise, has often had the effect of controlling the chorea for a limited time, but it almost always recurred later.

A very well-marked chorea is recognized

easily. It is very seldom, indeed, that we meet in a section students who do not make such a diagnosis. Motor disturbances begin gradually, the child is unable to sit still, makes faces, wriggles, continuous use of fingers, drumming on the table, or doing something all the time. We very early have change in speech, due to the fact that the tongue, and muscles that take part in speech, are affected. A child may say a few words, then suddenly stop, unable to pronounce any more—may whisper, or, after interruption, go on and continue the sentence.

The choreic motor disturbances affect, as a rule, the voluntary muscles, and are frequently more prominent on one side of body than on the other. The breathing may be affected the same way as the interruption of the speech, and sometimes the child cannot perform the smallest movements with muscles. If you tell her to point out the index finger, say, she may flex or extend the whole hand, or do any kind of motion but the one asked for, and in a short while go on and perform the act or movement asked.

In this disease the whole motor tract from the cortex down to the motor nerve endings in the muscles may suffer, but various portions of the tract may not be affected alike,—one may be stimulated, another depressed or inhibited. If the upper motor neurons are severely affected, its restraining influence on the lower neurons is removed, the reflexes excite them, and it is noticeable in the speech affected, and the knee jerks exaggerated. The pupils may not react evenly to light, one beginning to dilate before the other, and they may show inequality. Langmead says that he has not found this altered accommodation in any general condition except articular or cardiac rheumatism or chorea.

This is explained by the motor impulse getting off the original track and reaching

muscles never intended to be set in motion. Usually during sleep the choreic movements cease. In severe cases the gait may be uncertain; the child cannot sit, stand or walk, cannot be still, and often falls out of bed. The disposition of the patient is usually changed. They cannot concentrate their attention when performing any mental work. They are very moody, can be easily excited to laughter or tears, and exhibit great psychic depression.

As a rule, they are anæmic, and we know that most of the acute infectious diseases produce an amount of secondary anæmia, which is particularly true of rheumatism and its associate disease, endocarditis; great diminution of muscular tone, anorexia, and if the child cannot sleep the condition may be very alarming. On the other hand, if they get sufficient nourishment and sleep, their appearance is fair. Urinary findings are, as a rule, negative. There may be an excess of uric acids due to great muscular activity. Albumin, if present, is as a rule due to complication.

As I said before, there are cases that are easily diagnosed, not only by the physician but very often by many others, as the school teacher, mother or friend.

I would like to say a word about the very many early cases that could have been diagnosed before more serious symptoms have developed.

If one watches the number of children that play,—school-room, at the table or any place where a number of children congregate,—one will find a very large percentage of them exhibiting restlessness, some slight twitching and, on closer examination of these cases, that they cannot perform fine movements without fibrillary tremor, and are true cases of mild chorea. Such cases are often brought in the clinic for treatment of other ailments, and very often run an afebrile course, sleep and eat well, and do not appear to be much disturbed



from the disease. However, in such cases relapses are very frequent, and, as a rule, they are milder than the original attack, but they may be very severe, owing to the danger of being followed by an endocarditis.

The duration of an ordinary case of chorea is usually from one and one-half to two months in the mild form, and in the severe form from six to eight months.

*Pathology:* Very little is said in textbooks about the pathology of chorea, and physicians as a rule say "there is no pathology of chorea." As a rule, post-mortems find a toxic infectious lesion in the cerebellum, not sufficient to produce anatomical findings. All changes are diffuse and involve the entire central nervous system.

The cortex cerebri is chiefly affected, and in some cases there is an involvement of different areas of the spinal cord. Various inflammatory and vascular changes have been described, various alterations in the cortex of the cells, but these changes are not constant, and are attributed by some authorities to complications.

Drs. Poynton and Paine have found in the joints of acute rheumatism a diplococcus which, when injected into animals, produced polyarthritis, endocarditis and symptoms resembling human chorea. Diplococci rheumatici were not only found in heart lesions in cases of chorea, but were also found in the small vessels of the cerebral cortex. In chorea, Pianese has established a bacillus and a coccus from the central nervous system, the former of which produced convulsions when inoculated into animals.

Guthrie says: "It seems, on the whole, most probable that chorea is the result of an infective process, though it cannot be decided whether the symptoms are due to direct irritation of nerve elements by organisms, or to a general toxemia, induced by their action.

The presence of micro-organisms in the

immediate neighborhood of the cerebral cortical cells suggests local action, but a toxic condition of the blood may also play a part.

It is true that some cases of temporary chorea may perhaps be due to other micro-organisms or to toxins, like in the puerperal woman; and clinicians have observed that girls suffering from chorea in early life are apt to have puerperal insanity later in life. The disease being easily inoculated in lower animals, it will not be long before the pathology will be established on a more constant and firm foundation.

It is very seldom chorea is taken for any other disease. The only difficulty I have ever met was in the mild forms of tic. It may be very hard in the beginning. Choreic movements are general; tic is confined to special parts. I have often observed tic of the head. The facial expression in tic is quick and vivacious, in chorea usually stupid, and later the general nutrition suffers in chorea but does not in tic. Between true chorea and hysterical chorea we ought not to meet with any difficulty. Hysterical chorea is usually after puberty; true chorea is a disease of early childhood as a rule. We may meet with some cases in schools where often children, seeing others, try to imitate, but these are not true hysterical choreas. In hysterical chorea there is usually a tremor of the limbs, characterized by rhythmical spasms of the individual muscles, and other hysterical stigmata will clear up the diagnosis.

When we see a case of chorea under treatment we may be sure that the child is taking arsenic in some form, and it is so common that I have been in the habit of asking the mother, "How many drops are you giving your child now?"—because it is Fowler's solution that is prescribed, beginning with small doses gradually pushed to the physiological effect, then dropped and begun over again. If we ask a student,

"What medicinal treatment would you give a child with chorea?"—answer, "Arsenic."

While writing this, I have demonstrated to the class two cases that have been under large doses of arsenic and were not improving; reducing the arsenic, the patients begun to improve and did just as well and were getting well after the arsenic was withdrawn altogether.

Dr. W. Murray ("Rough Notes on Remedies," 1899, p. 17, Third Edition) says: "It is to be regretted, I think, that the Newcastle quack who confessed on his death-bed that his chorea cure contained large quantities of arsenic, did not die impenitent." Had he merely confessed to spells and incantations, he would not have done much harm, but, as Voltaire says, "Spells and incantations, when combined with a sufficiency of arsenic, may destroy whole flocks of sheep." We know that arsenic in large doses is not a specific for chorea. Arsenic in small doses may benefit some cases. Arsenic pushed, large doses, and when the accumulated amount has reached its height, the choreic movements may cease. Dr. Roleston asked this question, "Does arsenic cure chorea because it makes the patient ill in another way, and unable to manifest the original disease?" Dr. Guthrie says, that an arsenical peripheral neuritis may be superheaded to the original complaint. J. Burnett objects strongly to arsenic: Firstly, because large doses must be given, and they produce neuritis; secondly, the results, if any, are not permanent; thirdly, drugs have no influence over complications or sequelæ of chorea; fourthly, it does not benefit the rheumatic constitution of the patient.

The facts that the emotional neurotic temperament plays a principal part in the production of chorea, is sufficient reason for condemning the practice of poisoning children with arsenic or any other drug.

Arsenic is losing ground in general for

the treatment of chorea, and is seldom prescribed in large clinics. Men of extensive experience all over claim for it no more than for any other drug, and say that it is very injurious in large doses. The drugs that are useful are salicylates and its groups, or aspirin.

Dr. D. B. Lees (Harveian Lectures, 1903) gives salicylate of soda, 100 to 300 gr. a day, to children from six to ten years of age.

Zaussailoff ("Wratchebniga Gazeta," 1904) treated a large number of choreic children with salicylates, patients from three to twelve years of age, that had no apparent rheumatic symptoms, and no history obtainable of a rheumatic diathesis. The effects were striking in all cases; all improved when the arsenic failed.

J. Burnett strongly believes chorea a rheumatic manifestation; the movements being only an exaggeration of the natural restlessness of rheumatic children. He uses salicylates altogether. He believes the aceto-salicylate best, to be given in milk, and the tablet form of salicylates not good; strongly objects to arsenic.

To say that the salicylate group should be prescribed in every case of chorea will not be correct. Mild cases of chorea, where there are not indications of grave complications, tonic treatment and rest is the proper course. Here, again, I would not confine every case to bed; while it may be very good in some cases, in children that are not very active and usually resigned to stay in bed, or confined to their room, it will make an active, playful child worse. Yet such men as Byron Bramwell, in his lectures at the Royal College, at Edinburgh, says, "I am strongly of the opinion that rest in bed is the proper treatment in the earlier stages of all cases of chorea, for it is in the early stages of the disease that endocarditis is most apt to be developed."

Rest in bed should be insisted upon in all severe cases—absolute rest. A modified

Weir-Mitchell rest treatment, described by John Ruhrah ("Archives Pediatrics," Vol. 25, p. 101), is the best in chorea.

Rest for both mind and body, and increased weight of child, is aimed at. He puts the child to bed after a bath, until movements have ceased entirely and patient gained in weight. Daily warm baths and massage, a diet of milk, first from three to eight ounces every two or three hours, and increased gradually. Bowels open and the salicylates. If child is quiet and gaining after ten days, he allows it to get up for a trial. It usually gains from three to six pounds. In forty cases treated in this way he only reports one failure.

Baccelli, in Rome, one of the best clinicians in the world to-day, praises camphor monobromate, from 15 to 30 grains a day; rest in bed; hot packs, temperature of 90° Fahr.

Bernardo relates a case of chorea in a child nine years of age, where arsenic treatment failed; 15 grs. daily of monobromate of camphor pushed to 30 grs.; after four or five days the movement stopped. He stopped the camphor and resumed the arsenic again, and the patient got worse. Camphor resumed after a few days and the child improved, and in eight weeks got well and no relapse in years.

Parathyroid gland is given a great deal in Italy. Sea-water injections, quinine, antipyrine, hyoscine, physostigmin and even inhalation of chloroform has been recommended.

To sum up the treatment of chorea, I would say that there is no specific drug in this disease. The treatment of severe and mild cases differ, and, as we all know, the treatment of dispensary and private cases differ; but in general put the patient to bed when it is possible, and this must be insisted upon in all severe cases.

Prof. Dejerine isolates his patients in bed surrounded by screens; gives them a milk

diet, from one to five quarts of milk daily. We have never been able to give that much, but we insist on a milk diet also.

*Drugs:* Salicylate of soda should be given in all cases. In severe cases a sedative is indicated. Bromide, chloral, chloretone, trional, vironal, sulphonal, and others should be given, if indicated, especially to assure rest. Warm baths or packs, tepid sponging, sometimes a cold douche and massage. If the child is very restless, strap in bed if necessary.

*Tonics:* Bitter tonics, iron, nux-vomica are indicated. The complications require their own treatment.

Avoid scolding, teasing or schooling, but at the same time be firm with the child, and it is very often necessary to remove the child from family and friends. All reflex irritations should be removed; especially is this true of diseased tonsils, as we know it is a portal of infection for rheumatism, but I mention again, diseased tonsils—and it requires an expert to recognize a diseased tonsil. All large and inflamed tonsils are not diseased tonsils. Here I would like to say a word about the wholesale removal of tonsils in children when it is not indicated. Our profession gets spasmodic spells about removing something or other from our patients. Once it was circumcision, and every child was circumcised, regardless of necessity (I mean to the patient). While there are still some that do it, it is not as prevalent as it has been, because it is the tonsil that comes in for it now.

If a tonsil is not diseased and does not interfere with the breathing, I do not see any necessity for a tonsillotomy or a tonsillectomy. Leave it alone, it has its use. The best laryngologists say the normal tonsil should not be disturbed, particularly in infancy and childhood. It has a function and should be left alone. Almost everything has been blamed to the poor, harmless tonsil, and too much promise is



held out to mothers for their children if the tonsils are removed. The parents are often disappointed. I hope we will find something else, soon, to remove, and leave the normal tonsil alone.

Correct any nose and throat trouble; remove the child from would-be kind friends or nurses that are in the habit of telling the child ghost stories. Any operation indicated should not be performed while the child has an active attack of chorea. Wait until the child is better.

#### CONCLUSIONS

First, urge an earlier diagnosis of chorea minor. As mentioned before, many cases come in to see us about other ailments; we can often note slight fibrillary twitching, and on a careful examination make a diagnosis of chorea. So much can be done for the child's future by early treatment.

Second, add to this our own clinical

observations of its association with rheumatism, tonsillitis and endocarditis.

Third, the beneficial results from the salicylates and rest in bed, and milk diet.

Fourth, teach the parents and teachers in school to recognize this disease early, as it is during this time that we can remove the child from other children.

Fifth, stop the wholesale abuse of arsenic in this disease.

Sixth, examination of school children by school physicians should include an exclusion of the choreic child from school.

Seventh, isolate all severe cases.

#### REFERENCES

Pfloundler and Schlossmann, "Diseases of Children."

Leonard G. Guthrie, "Functional Nervous Disorders in Children."

"Archives of Pediatrics," Vol. 22, 1905.

"Modern Clinical Medicine." (Diseases of Children).

"International Medical Annual," 1910.

#### SURGICAL SUGGESTIONS

In an injury to the wrist tenderness just distal to the radius and in the "anatomical snuff box" is significant of fracture of the scaphoid.—*American Journal of Surgery.*

Lavage of the stomach preparatory to an operation for intestinal obstruction had best be done before anesthetizing. Performed during narcosis the procedure may cause alarming embarrassment of respiration, and if the throat should become flooded with mucus or stomach content, as occasionally happens, an aspiration pneumonia is very apt to follow.—*American Journal of Surgery.*

Many, if not most, of the cases of shoulder pain variously diagnosed as circumflex neuritis, rheumatism, etc., are instances of subacromial or subcoracoid bursitis. With involvement of the former bursa there is usually tenderness just beyond the acromion, usually somewhat anteriorly; in the latter there is marked tenderness just external to the coracoid tip. Pain on rotation of the arm may be present in either; it is most constant in subcoracoid bursitis.—*American Journal of Surgery.*

When dealing with a chronic bone abscess (and often, too, in acuter cases) it saves weeks of after treatment to work with an osteo-periosteal ("coffin lid") flap, and close the wound completely.—*American Journal of Surgery.*

If a patient with the signs and symptoms of chronic appendicitis is unduly anemic and has lost weight, be prepared for the possibility of a more serious lesion, e. g., neoplasm, ileocecal tuberculosis.—*American Journal of Surgery.*

When resecting the cecum be careful not to tie the mesentery of the ascending colon too close to the bowel—the anastomosing loop of the ileo-colic and colica media lies very near the gut.—*American Journal of Surgery.*

After resection of the small bowel lateral anastomosis possesses several advantages, as to safety, simplicity and patency, over end-to-end union. The gut ultimately becomes a straight tube if the stoma is made near the closed ends.—*American Journal of Surgery.*

## The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to Wilfrid Haughey, A. M., M. D., Editor, 24 West Main Street, Battle Creek, Michigan. The Society does not hold itself responsible for opinions expressed in original papers, discussions or communications.

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APRIL

### EDITORIAL

Your Committee recommends, that on May first of each year the Journal of the State Society be discontinued to all subscribers and members in arrears and that such members be reported to the Secretary of the American Medical Association as "dropped for non-payment of dues."—*Report of Business Committee unanimously adopted by House of Delegates.*

#### PAYMENT OF DUES

REFERRING to the paragraph above, those of our members in arrears will see that they now have only one month in which to pay dues and continue in good standing. The names of all those in arrears on May 1st will be taken off the list before the mailing of the June JOURNAL.

#### MEMBERSHIP IN THE A. M. A.

ON page 195 we are printing a letter received from the Secretary of the Board of Trustees of the American Medical Association relative to making membership in the County and State Society carry with it membership in the American Medical Association. Since the Michigan State Medical Society does not meet until September, it will be impossible for Michigan to take action before then.

The columns of the JOURNAL will be open to the extent of available space for discussion upon this matter. We hope to present both sides, so that intelligent action may be taken at our Annual Meeting in Detroit

in September, when the matter will come up before the House of Delegates.

#### LEGISLATION OF INTEREST TO PHYSICIANS

THE number of people in this State outside of the medical profession taking an active interest in matters relating more or less directly to medical practice is surprisingly large. This is particularly evidenced by the bills which find their way to the Legislative halls at Lansing. The Michigan State Medical Society through its Legislative Committee and its Council is responsible for but one of these bills, The Reynolds Bill,—H. R., No. 235. The Committee appointed at Kalamazoo to secure legislation to protect the term "certified milk" has introduced a bill by Senator Watkins, S. B. No. 272.

Others than these two bills are being urged by non-medical people. In order to protect its rights and prerogatives and prevent too severe penalties being imposed, it behooves the medical profession to at least know what the legislature is doing. It would be to our advantage to direct its action along some lines.

Following are some of the bills relating more or less directly to Medical Practice and Medical Rights:

#### HOUSE BILL NO. 235, FILE NO. 100

Introduced by Mr. Reynolds, February 2, 1911.  
Referred to the Committee on Public Health.

A BILL to amend Sections 3, 5, 7, 8 and 9 of Act. No. 237 of the Public Acts of 1899, entitled, "An act to provide for the examination, regulation, licensing and registration of physicians and surgeons, and for the punishment of offenders against this act, and to repeal acts and parts of acts in conflict therewith," as amended by Act No. 191 of the Public Acts of 1907.

This is the bill prepared by the Legislative Committee of the Michigan State Medical Society to give State support to the Michigan State Board of Registration in Med-

icine. It carries a better definition of "Practice of Medicine." *"In this act, unless otherwise provided, the term 'practice of medicine' shall mean the actual diagnosing, curing or relieving in any degree, or professing or attempting to diagnose, treat, cure or relieve any human disease, ailment, defect or complaint, whether of physical or mental origin, by attendance or by advice, or by prescribing or furnishing any drugs, medicine, appliance, manipulation or method, or by any therapeutic agent whatsoever: Provided, That this interpretation of the 'practice of medicine' shall not apply to persons who confine their ministrations to the sick and afflicted or disabled to prayer and without the addition of material remedies or professional fees."*

#### SENATE BILL 154, FILE NO. 142

Introduced by Senator Snell February 8, 1911. Referred to the Committee on Public Health.

A BILL to regulate the production and sale of certified milk, to provide for the enforcement thereof, and punishment for the violation of the same.

An incomplete and inadequate bill introduced by a dairyman. No standards of "certified milk" are set. The milk commission is hemmed in by restrictions, but has no powers.

#### SENATE BILL 272, FILE NO. 254

Introduced by Senator Watkins March 8, 1911. Referred to the Committee on Public Health.

A BILL providing for the incorporation of medical milk commissions, and the certification of milk produced under their supervision.

This is the bill prepared by the Committee of the Michigan State Medical Society to protect the term "certified milk." The committee on Public Health of the Senate consists of Messrs. F. D. Scott, A. C. Kingman and H. T. Barnaby.

#### SENATE BILL 139, FILE NO. 129

Introduced by Senator Kline, February 2, 1911. Referred to the Committee on Judiciary.

A BILL to prohibit certain classes of immoral advertising, and to provide punishment for violators hereof.

*The People of the State of Michigan enact:*

SECTION 1. Any person who shall advertise in his own name or in the name of any other person, firm, or pretended firm, association, corporation, or pretended corporation, in any newspaper, pamphlet, circular, periodical or other written or printed paper, or the owner, publisher or manager of any newspaper or periodical who shall permit to be published or inserted in any newspaper or periodical owned or controlled by him, an advertisement of the treating or curing of venereal diseases, the restoration of "lost manhood" or "lost vitality or vigor," or shall advertise in any manner that he is a specialist in diseases of the sexual organs, or diseases caused by sexual weakness, self-abuse, or in any diseases of like cause, or shall advertise in any manner any medicine, drug, compound, appliance or any means whatever whereby sexual diseases of men or women may be cured or relieved, or miscarriage or abortion produced, or shall advertise any medicine or means whatever whereby the monthly periods of women can be regulated, or the menses re-established, if suppressed, shall be guilty of a gross misdemeanor, and upon conviction thereof shall be punished by a fine of not less than fifty dollars nor more than five hundred dollars, or by imprisonment in the county jail for not more than six months, or both, in the discretion of the court. But this act shall not be construed as creating an additional penalty for the acts made unlawful by Act No. 237 of the Public Acts of 1899, as amended by Act No. 164 of the Public Acts of 1907.

SECTION 2. Any person publishing, distributing or causing to be distributed or circulated any of the advertising matter hereinbefore described, either in newspapers or other printed or written forms, shall be guilty of a misdemeanor as noted in Section 1 and punished as therein prescribed.

SECTION 3. Any advertisement found in any newspaper, pamphlet or circular, containing the words "lost manhood," "lost vitality or vigor," or other expression synonymous therewith, shall be prima facie evidence of the guilt of the party or parties subscribing to the said advertisements, their agents or representatives, and the same penalties shall apply to the publishers of the papers containing the same as are prescribed in Section 1.

This is a much-needed measure which



will clean up our public prints and should pass.

Committee on Judiciary: Senators C. E. White, C. E. Mapes, G. A. Miller, J. Vanderwerp, F. D. Scott.

#### HOUSE BILL NO. 61, FILE NO. 20

Introduced by Mr. Glasner, January 12, 1911.  
Referred to the Committee on Judiciary.

A BILL to amend Section 6 of Chapter 83 of the Revised Statutes of 1846, entitled "Of marriage and the solemnization thereof," said Section being compiler's Section 8593 of the Compiled Laws of 1897, as amended by Act No. 247 of the Public Acts of 1899, as amended by Act. No 136 of the Public Acts of 1905.

This bill provides that "*no insane person, idiot, epileptic, feeble-minded, imbecile or person who has been afflicted with open tuberculosis, syphilis, or gonorrhea, and has not been cured of the same, shall be capable of contracting marriage;*" also that "*no license shall be issued by the county clerk of any county in this State to any persons not procuring and filing with him at the time of the making of the affidavit for a license to marry as provided by the laws of the State of Michigan a certificate of a legally practising physician, which certificate shall be in writing certifying that said persons so applying for such license to marry are not at the time of so applying afflicted with any of the diseases mentioned in this act, and such certificate shall further state that there is no probability that such persons will transmit any of such defects or disabilities to the issue of such marriage.*"

The bill was amended by inserting. "*Provided, That the probate court of each county shall appoint a regularly licensed, practising physician residing at the county seat who shall make the examination and certificate for applicants not residents of this State for marriage licenses, and provided further, that no physician shall be entitled to charge a fee in excess of one dollar for any such examination.*"

This bill is of especial importance to physicians in that it requires them to make positive statements concerning matters about which they cannot be positive. It also limits the fee which the physician shall receive to a sum entirely inadequate for the work necessary to making these examinations anything more than a farce.

This bill as amended passed the House March 14, and is now in the Senate Committee on Judiciary.

#### SENATE BILL 109, FILE NO. 99

Introduced by Senator Taylor January 26, 1911. Referred to the Committee on Public Health.

A BILL to provide for the reporting of occupational diseases by physicians.

*The People of the State of Michigan enact:*

SECTION 1. Every physician attending or called upon to treat a patient whom he believes to be suffering from poisoning from lead, phosphorus, arsenic or mercury, or their compounds, or from anthrax, or from compressed air illness, contracted as a result of the nature of the patient's employment, shall send to the Commissioner of Labor a notice stating the name, post-office address and place of employment of the patient, the length of time of such employment, and the disease from which in the opinion of the physician the patient is suffering.

SECTION 2. Any physician who shall fail to make any report required by the preceding Section, or who shall wilfully make any false statement in such report, shall be deemed guilty of a misdemeanor and on conviction thereof shall be punished by a fine of not more than fifty dollars.

SECTION 3. It shall be the duty of the Commissioner of Labor and of the prosecuting attorney of the county where any one violating the provisions of this act may reside to prosecute all violations of the provisions of this act which shall come to the knowledge of them or either of them.

#### HOUSE BILL NO. 269, FILE NO. 131

Introduced by Mr. Wood, February 9, 1911.  
Referred to the Committee on Public Health.

A BILL to amend Sections 1 and 5 of Act No. 30 of the Public Acts of 1909, entitled "An act to regulate the sale of cocaine, its salts; alpha or beta eucaine, their salts; or any preparation of cocaine or its salts; or any preparation of alpha

or beta eucaine or their salts; or any compound, mixture, solution or other product of which cocaine or any of its salts or alpha or beta eucaine or any of their salts may be an ingredient."

The amendments in this bill limit the application of the law to manufacturers, jobbers, wholesale druggists, registered pharmacists, registered druggists, registered or licensed physicians, veterinarians or dentists. This bill passed the house March 6.

#### HOUSE BILL NO. 119, FILE NO. 91

Introduced by Mr. Copley, January 19, 1911.  
Referred to the Committee on Public Health.

A BILL to amend Sections 2 and 3 of Act No. 105 of the Public Acts of 1901, entitled "An act to prohibit the conducting, establishing or maintaining, or carrying on without a license of any maternity hospital, lying-in asylum or other place for the receiving, caring for or treating of females during pregnancy, or during or after delivery, and to provide for the licensing and regulation of the same," and to repeal Section 5 of the same act.

This bill provides for reports regarding maternity hospitals by Boards of Health,—and that children shall not be indentured or adopted out of such hospitals until the home to which they go is approved by the County Agent. It also provides for visits to such hospitals by any member of the State Board of Corrections and Charities. The bill passed the House March 14, but was reconsidered as it would very seriously interfere with such worthy institutions as the House of Providence, Home of the Good Shepherd, etc. It requires reports of the names of all inmates.

#### HOUSE BILL NO. 167, FILE NO. 130

Introduced by Mr. Myers, January 25, 1911.  
Referred to the Committee on Public Health.

A BILL to amend Section 15 of Chapter 35 of the Revised Statutes of 1846, relative to the preservation of the public health, quarantine, nuisances and offensive trades, being Section 1647 of Howell's Annotated Statutes, as amended, and being Section 4424 of the Compiled Laws of 1897, and as amended by Act No. 7 of the Public

Acts of 1903, and Act No. 98 of the Public Acts of 1909.

This amends the law by adding the following to Section 15: "*Provided further, That the board of supervisors of any county in this State may by resolution passed at any session, regular or special, of said board, provide that the expenses in this section provided for, shall be audited by the township board, the city council or commission or village council or commission, as the case may be, of the township, city, or village of which such person shall be a resident, in the manner hereinbefore provided for audit by the board of supervisors, and that such expenses shall be a charge against such township, city or village; such resolution to take effect and be in force from and after the first day of January following its adoption, and shall remain in full force and effect until rescinded by said board: Provided further, that such resolution shall not apply to expenses incurred by any village, township, or city for a non-resident of the county.*"

The object of this bill is to throw the expense of caring for contagious diseases upon the town or city,—thus relieving the general county tax, and increasing the local tax. It is of importance to physicians in that we may have to present our bills to the local health boards, rather than the Board of Supervisors. The bill passed the House March 6.

#### HOUSE BILL NO. 123, FILE NO. 94

Introduced by Mr. Parks, January 19, 1911.  
Referred to the Committee on Public Health.

A BILL to provide for the regulation, licensing and registration of chiropractors practising chiropractic, and for the punishment of offenders against this act.

This bill delegates the appointing power to the Michigan State Association of Chiropractors. It fixes no standard of education specifically, but provides that after June 1, 1912, the applicant "*shall be possessed of an education equal to a three*

*years' high school course, Michigan standard. He must also be a graduate of a school or college teaching the science of chiropractic, which school or college has an entrance examination requiring three years of high school work or its equivalent and shall require a course of personal instruction equal to the standard of the Michigan College of Chiropractic, but such instruction shall not be given by correspondence."*

No course of studies is prescribed, and at the hearing before the Committee on Public Health the chiropractors stated they studied anatomy only,—all other studies being unnecessary. They do not do dissection, but study anatomy and are limited to the anatomy of the spine, by "inspection, feel, and Gray's text-book."

Section 4 provides: "*The science of chiropractic is hereby defined to be the art of locating those irregularities and subluxations of the spinal column which cause disease, and the adjustment of the vertebrae by hand without the use of any other adjuncts with the intent thereby to remove the cause of disease.*"

The bill as amended provides a two years' course of study, and prohibits the treatment of any communicable or contagious disease or surgical case. It also forces those now in practice to come within the provisions of the bill. As amended it has passed the house. It opens up another short cut to the practice of medicine, and should be defeated.

#### HOUSE BILL NO. 121, FILE NO. 73

Introduced by Arthur O'Dell, January 19, 1911. Referred to the Committee on State Affairs.

A BILL to provide for the prevention of procreation of confirmed criminals, idiots, imbeciles, feeble-minded and insane persons.

Has our knowledge of insanity and its hereditary effects progressed to the stage that we wish to prevent procreation in more than the criminal insane? Would it

not be better at present to except the non-criminal insane?

Should the exact operation to be performed (vasectomy or oophorectomy), be indicated, or should that be left to the surgeon?

Section 2 reads: "*Except as authorized by this act, every person who shall perform, encourage, assist in, or otherwise promote the performance of either of the operations described in Section 1 of this act, for the purpose of destroying the power to procreate the human species, or any person who shall knowingly permit either of such operations to be performed upon such person, unless the same shall be a medical necessity, shall be fined not more than one thousand dollars, or imprisoned in the state prison not more than five years, or both in the discretion of the court before whom the said persons were so convicted.*"

Are medical men ready to have restrictions placed upon them in such a manner that they can with extreme difficulty defend themselves if attacked? Suppose a surgeon does an ovariectomy, and does not save the specimens, how many would be able to prove the "medical necessity" in court a few years later?

This bill passed the house March 7, and is now in the Senate, being referred to the Committee on State affairs, Senators Kline, Barnaby, Kingman, Bradley and Geo. G. Scott. The title is amended to read:

"*A bill to authorize the operation of vasectomy or oophorectomy in certain cases and to provide a penalty for the unauthorized use of said operations.*"

#### HOUSE BILL NO. 208, FILE NO. 103

Introduced by Mr. Henry, January 31, 1911. Referred to the Committee on Towns and Counties.

A BILL to amend Section 2 of Act No. 58 of the Public Acts of 1909, entitled "An act relative to the adjustment and payment of claims against counties, and to provide appeals from the disallowance thereof."



This bill amends the law of 1909 by inserting, "*Provided, That no appeal shall be allowed unless such claimant shall have appeared before the said board and presented evidence in support of such claims or attached an affidavit thereto.*"

The bill has passed the house, and is now before the Committee on Counties and Townships of the Senate, Senators Murtha, White and Walter. The ten-day limit for appeal will probably be extended to 30 days.

(See page 199.)

## IN MEMORIAM

Thomas Graham, M. D., Grand Rapids Medical College, 1907, died at his home in St. James, Beaver Island, Michigan, January 16, from diabetes, aged thirty-four

John Kapp, M. D., University of Michigan, Ann Arbor, 1868; formerly a member of the Michigan State Medical Society, and Washtenaw County Medical Society; for three terms mayor of Ann Arbor; died at his home in Los Angeles, January 17, from general breakdown, aged sixty-nine.

James Kelley Farnum, M. D., University of Michigan, Ann Arbor, 1870; surgeon for the Pere Marquette and Grand Trunk systems for several years; died in the City Hospital, Port Huron, Mich., February 11, from shock following the amputation of a foot as the result of a street-car accident four days before, aged sixty-four.

John C. Nottingham, M. D., Bennett Medical College, Chicago, 1873; a veteran of the Civil War; at one time treasurer of Delaware County, Ind.; a charter member and one of the organizers of the Saginaw Valley Medical Society; died at

his office in Bay City, Michigan, February 25, from heart disease, aged sixty-nine.

Amy Garrison Brown Kimball, M. D., Cleveland College of Physicians and Surgeons, 1878; for three years interne in the Northeastern Hospital for Women, Boston; died at her home in Jackson, Michigan, January 29, from pneumonia, aged sixty-three.

Thomas E. Briggs, M. D., Saginaw Valley Medical College, Saginaw, Michigan, 1903; of Saginaw; formerly a member of the Michigan State Medical Society, and Saginaw County Medical Society; died at the Saginaw General Hospital, February 23, from pneumonia, aged thirty-two.

Colin B. McKenzie, M. D., University of Michigan, 1891, formerly a member of the Michigan State Medical Society, and Huron County Medical Society, of Harbor Beach, died March 6, of heart complications, aged fifty-one.

Mrs. Jennie J. Willson, wife of Dr. Mortimer Willson, died at her home in Port Huron February 26. She had been in poor health for several months, and to devote more time to her, Dr. Willson resigned from the Council of the Michigan State Medical Society about a year and a half ago.

Bartlett Norton Torrey, M. D., Washington University, St. Louis, 1874; a member of the American Medical Association; a member of the Michigan State Medical Society; formerly local surgeon of the Burlington System, and vice-president of the Cottage Hospital, Creston, Ia.; superintendent of the Omaha General Hospital in 1905 and 1906; for the last two years a resident of Detroit; died in Harper Hospital, March 2, from nephritis following prostatectomy, aged 66.

## COUNTY SOCIETY NEWS

### CALHOUN

The first quarterly meeting of the Calhoun County Medical Society for 1911 was held at Albion, March 7th, with eighteen members present and President Marsh in the chair.

The plan of interchangeable meetings with the Kalamazoo Academy was adopted. By this method a better spirit of friendliness and acquaintanceship will be established.

The Scientific program had four numbers. Dr. W. H. Haughey, of Battle Creek, added a few items of interest to his paper on "Contract Practice," read at the December meeting, the discussion of which was adjourned to the March meeting. Quite active discussion was provoked, and nearly all present participated. Dr. L. S. Hodges, of Tekonsha, gave a practical talk on "Uticaria," in which he related some interesting experiences in the treatment of uticaria. Dr. Hodges' experiments were with creosotiodid, and the results were certainly very pleasing. Dr. J. C. Brown, of Battle Creek, gave an interesting talk on "Varicose Ulcers and their Treatment." The discussion was active and practical. "Variola" was the subject of Dr. A. S. Kimball's paper, illustrated with a few photographs of recent cases.

Adjournment was taken to Ceresco for the June meeting, where the Society becomes the guest of Dr. R. M. Gubbins.

#### COMMITTEES FOR 1911

Program, A. S. Kimball, H. A. Powers and A. J. Abbott. Necrology, R. C. Stone, R. M. Gubbins and G. B. Gesner. Entertainment, G. C. Hafford, H. A. Herzer and Wilfrid Haughey.

A. S. KIMBALL, *Secretary*.

### GENESEE

At the regular quarterly meeting of Genesee County Medical Society, January 31, the physicians and dentists of the County listened to an interesting paper by Dr. R. W. Bunting, of Ann Arbor, upon "The Relation of the Dentist to the Physician." The Doctor traced historically the close relationship of dentistry and medicine, and the necessity of co-operation between the dentist and the physician for the welfare of the patient. How necessary it is for the physician, in the ex-

amination of the mouth and tongue, also not to miss the general condition of the teeth and gums, as pyorrhea and decayed teeth are great factors in the causation of indigestion. The too early removal of the first teeth by the general practitioner, who is ignorant of the subsequent evil results, such as a deformed palatal arch and unspacement and crowding of the second teeth, is to be condemned.

Likewise the dentist should remember that the causes of pyorrhea and associated diseased conditions of the gums are always deeper seated than a local condition, and may be due to debilitated conditions of the body, and these cases should receive medical attention.

An interesting discussion followed. A committee of three was appointed to revise the Constitution and the Fee Bill.

Dr. Don D. Knapp, a member of the local Society, has been appointed Health Officer of Flint.

C. P. CLARK, *Secretary*.

### GRAND TRAVERSE

The regular monthly meeting of the Grand Traverse-Lenawee County Medical Society was held on the evening of March 7 in Dr. Holdsworth's office. Eight members were present. Minutes of last meeting were read and approved. Several letters were read and the Chiropractic Bill was discussed.

Dr. E. A. Miller, of Suttons Bay, was admitted to membership in the Society.

Dr. Holdsworth read an interesting paper entitled "Tonsillectomy, its Indications and Contraindications." A general discussion followed. A discussion was also held on Salvarsan.

Dr. Fralick, of Maple City, invited the Society to hold its annual picnic at his cottage at Glen Lake. The invitation was accepted. After deciding to hold the next meeting at the Northern Michigan Asylum, the Society adjourned.

R. E. WELLS, *Secretary*.

### JACKSON

Jackson County Medical Society held its first quarterly meeting in the Library Auditorium Thursday, March 2, at 2.30 P. M. After a short

business session, Dr. Guy L. Kiefer, Health Officer of Detroit, took up the subject, "Medical Inspection of School Children." Many of the teachers and interested parents attended the very interesting and instructive lecture.

At the evening session, held at 7.30 p. m., Dr. Kiefer spoke on the subject, "Prevention of Tuberculosis." Dr. Eugene B. Pierce, Superintendent of the State Sanatorium at Howell, read a paper on "Sanatorium Treatment of Tuberculosis."

The Society adopted resolutions, and forwarded them to our Senator and Representatives, relative to the House Bill No. 123, for the regulation of the practice of the so-called chiropractors. Jackson is trying to rid itself of its reputation of being the home of charlatans and quacks.

G. A. SEYBOLD, *Secretary*.

### MECOSTA

The Mecosta County Medical Society met, March 1, as the guests of Dr. L. S. Griswold. A delightful chicken dinner was served at Doucett's Rest at 7 p. m., after which we adjourned to Dr. Griswold's residence for the scientific meeting.

Dr. Burton R. Corbus, of Grand Rapids, read a paper on "Pernicious Anemia," dwelling at length upon the theories of cause,—intestinal toxemias, atrophic stomach with loss of hydrochloric acid secretion, loss of liver function of converting the food element in the portal circulation to normal non-toxic and assimilable products, etc. The treatment was discussed, and several cases reported in which remission had lasted from three to seven and one-half years.

Dr. Alex. M. Campbell, of Grand Rapids, read a paper, "Some Remarks on the Use of the Cystoscope with Stereoscopic Illustrations." On account of lack of direct current, the stereoscope had to be dispensed with. The Doctor outlined the technique and difficulties of cystoscopy, and demonstrated some new instruments.

Both papers were fully discussed.

The Reynolds Bill, the medical bill introduced by the State Medical Society, was discussed and endorsed. The chiropractic bill was also discussed, and a resolution adopted to the effect that we look with displeasure upon any plan to legalize the practice of medicine, or any part of it, by persons without adequate training.

The State Secretary, Dr. Wilfrid Haughey, of Battle Creek, was present, and addressed the Society, especially answering questions regarding legislative matters.

D. MACINTYRE, *Secretary*.

### OTTAWA

The February meeting was held February 14, at the Council Rooms, Holland, Michigan.

Dr. Wm. DeKleine, of Grand Haven, Secretary of the "Good Roads Association," read a paper on the "County Roads System." He gave an instructive and interesting talk on the object of the movement, and stated that Ottawa County had contributed \$5,000 in taxes to aid other counties to procure good roads without any direct local benefit. The plans, as given, are to have trunk lines through the County, connecting the larger cities for a beginning, and later to build the feeders. The State aid varies from \$500 to \$1,000 per mile, according to material used.

Dr. Wilfrid Haughey, State Secretary, read a paper on "Submucous Resection of the Nasal Septum." He briefly outlined the indications for the submucous resection of the nasal septum, and the technique of the several operations done in straightening the septum. He presented drawings showing some of the deformities and the steps in the operation. He called attention to a method recently reported to avoid perforating the mucosa when cutting through the cartilage, and advocated leaving the anterior inferior edge of the quadrilateral cartilage as a bridge, for the support of the tip of the nose, which occasionally droops following this operation.

Dr. H. J. Poppen, of Holland, read a paper on "Tachycardia," and gave a complete review of the literature on the subject. He gave the subjective symptoms of the beginning of his own case, and the reports of leading clinicians in regard to it. He closed his subject by reading reports of cases in the JOURNAL, of two physicians who were subject to tachycardia, but whose manner of obtaining relief was so radically different.

Dr. Haughey then addressed the meeting in regard to the needs of the JOURNAL, and reported the condition of our defense fund.

GEO. H. THOMAS, *Secretary*.

### WAYNE

At a general meeting held Monday, February 6, Dr. G. van Amber Brown read a paper on "The Pathology of the Derivatives of the Primitive Foregut in the living," which he accompanied by lantern slide illustrations.

He emphasized the importance of the study of the pathology in the living as made possible by observation and study of conditions found in the



field of modern operation; he pointed to the advantage in positive diagnosis through this means as compared to the less complete post-mortem findings, upon which final diagnosis so often depends, and he further demonstrated that the post-mortem findings show only end results, while careful pathological study in the living not only brings out the physiological relations of associated organs depending often upon embryological facts, but also makes for greater surgical possibilities through the attainment of a more thorough knowledge of the early changes in primary disease, and this before such has become inoperable.

He further pointed to the importance of the study of pathology in the living by the surgeon, while operating.

As an example, he narrated an instance in which, while operating for pelvic disease, exploration of the upper abdomen through the pelvic incision revealed an unsuspected cholelithiasis. This was in a case which showed none of the symptomatology heretofore described as gall-bladder symptomatology, namely, vomiting, constipation, pasty stools and jaundice. Evidence, he said, is gradually accumulating from the study of living pathology, that none of these symptoms are essentially symptomatic of cholelithiasis, and that when present they are indications of complications.

Also after following up these patients and getting an anemnesis, one is able to elicit a history of symptoms referable to the stomach, which the patient refers to as indigestion. In this connection he has brought out the fact that by the study of pathology in the living we have better learned early symptoms and reduced the mortality in cases which heretofore were classified as incurable.

Instance: Ulcer of the stomach and duodenum has become a recent indication for operation, and affords a striking illustration of the progress of surgery in the last decade and a half.

Exploration of the abdomen has shown that recovering and chronic cases of indigestion were in a large percentage in reality gastric ulcer, with the result that in addition to the reduction of the mortality from nearly one hundred per cent. from medical treatment, to about five per cent. by surgical treatment in hemorrhage and perforation, and to twenty-three per cent. in chronic cases with malignancy, there has been eliminated the danger of cancer ingrafted upon the ulcer, which at the beginning was in itself benign.

As to duodenal ulcer, until recently scarcely anything was known of its symptomatology, and

it was supposed to be a very infrequent disease, while the facts are that of gastric and duodenal ulcer, three-fifths are found to be duodenal.

Cancer, which was uniformly fatal under medical treatment, through the study of the newer pathology and the knowledge of its presence depending upon previous ulcer, has come to be viewed from a different standpoint, with the result, that if the operation is performed early and by men well trained in this field of operative work, the mortality will be less than 10 per cent.

In gall-bladder disease under medical treatment, no cure can be effected, while surgically the percentage of cures is more than 97 per cent.

In speaking of the pathology of pancreatitis he says that it is secondary to inflammation of other organs, notably from its close relation to the bile ducts, the common bile duct, in most cases, passing through the head of the pancreas.

The treatment of pancreatic disease is surgical.

He concludes by urging upon the general practitioner better early diagnosis, which may be attained by closer observation and by following these patients into the operating room.

The paper was discussed by Drs. Manton, Meddaugh, Blain, Freund, Davis and Yates.

#### Good Fellowship Evening

The first Goodfellowship evening of the Wayne County Medical Society was held on Saturday evening, February 11th, at the Wayne County Medical Society Building.

This was the first function of its kind ever conducted by the Society, and it is the earnest hope and wish of every member, especially those that were present, that it will not be the last.

The entertainment committee had endeavored to make this evening one to be remembered by every man, and it is to be congratulated, for it well succeeded. Besides the feeling of good fellowship which prevailed generally, the regular program was as follows:

Stories full of wit and humor by W. A. Blodgett, card stunts by Dr. Woodward, violin solos very artistically rendered by Dr. Carl Oakman, and songs by Dr. Earl Barkley.

One fact was clearly demonstrated on this occasion, namely, that the members of the Society will come together if they but have a suitable meeting place. We now have a suitable meeting place, but we have already out-grown its capacity. The urgent need of an auditorium has now become an absolute necessity.

There were three hundred present, and the overcrowding was the one objectionable feature.

This feature will, however, soon be eliminated. We were told that \$10,000 have been paid on the building. This amount is over one-half of the entire cost of the building. Why not at the present time invest a little more, build an auditorium we so badly need, and at once enjoy the comforts thereof?

Even in our inadequate quarters everybody enjoyed a good time, and we hope that the near future will bring with it another such evening.

At the Surgical Section meeting held Monday February 13, Dr. J. A. MacMillan read a paper on **"Acute Post-operative Dilatation of the Stomach and Intestine."**

Abstract. Acute paresis of the stomach and intestine is most commonly observed after abdominal operations. It is, however, not unheard of following operations in other parts of the body. The symptoms very closely resemble those of organic obstruction. In the latter there is usually vomiting, followed in the course of twelve hours to two days by distention of the abdomen. In acute post-operative paresis this picture is reversed, and we have distention of the abdomen from the very first. In fact, the condition of acute paresis may be present without vomiting. Especially is this so early in the course of the acute paresis. Vomiting, as said, is usually present, and after two or three days the vomitus becomes dark brown or green, even fecal in character. No gas or feces pass from the rectum. Cathartics and enemata fail to relieve the condition.

The following factors play a part in the etiology, profound toxemia, prolonged manipulation of the abdominal viscera, administration of morphine, and drastic purgation immediately before operation.

The prophylactic treatment is important. Here is especially to be noted the avoidance of much handling of the peritoneal tissue.

The active treatment consists in the evacuation of the offensive material from the stomach and affected part of the bowel. Gastric lavage gives relief when the stomach alone is affected.

Even if there is no vomiting in case of marked distention of the abdomen, the stomach tube should be passed, and in a large majority of cases it will demonstrate the presence of a large amount of dark brown or greenish material which is poisonous to the patient. When vomiting is present the use of the tube should not be neglected, for rarely is the stomach able to empty itself completely. As said before, the stomach tube should be used often, every hour if necessary to keep the stomach empty.

Enemata are useful if the part of the bowel affected is the colon.

When there is paresis of a portion of the small intestine which does not yield to either of these measures, an enterostomy is indicated and this should not be delayed. Here delay may cost a life. For the enterostomy a general anesthetic should not be given nor is it at all necessary. A general anesthetic will surely kill your patient. Under local anesthesia the abdomen should be opened and the first part of the distended gut that presents itself should be grasped, pulled into the wound, stitched there with two or three stitches, and opened immediately. Irrigation of the bowel through this opening should be employed several times a day.

When the gas and fecal matter are evacuated, improvement begins promptly, and in the course of three or four days there is restoration to the normal condition.

The paper was discussed by Drs. H. O. Walker, Angus McLean, J. H. Carstens, Wm. F. Metcalf, F. B. Walker, Alexander W. Blain, Johann Flinterman and C. D. Brooks.

At the general meeting of the Wayne County Medical Society held Monday, February 20, 1911, Dr. H. O. Walker read a paper on **"Skin Asepsis."**

He first gave a synopsis of work in this direction since the time Pasteur demonstrated the cause of acute surgical inflammation. In the means for confining the same, Lister was the first to improvise, after repeated trials, a method of disinfection which was very cumbersome.

In the wake of this there has been a gradual improvement in the methods of preparing both the field of operation and the operator's hands. Furbinger introduced the use of alcohol, sixty to seventy per cent. being greater in bactericidal properties than absolute alcohol. Kronig and Futh have shown by their studies that the hot-water-alcohol method of Ahlfeld for hand disinfection at least is no better than many others, and further disinfection should be carried out.

After alcohol, bichloride of mercury probably stands at the top of the list as a means of disinfection of the skin. It has the property of working energetically and continuously for some time. In a great many clinics, Von Angerer's oxyamide of mercury has displaced bichloride entirely. It has the advantage of non-toxicity and not injuring instruments.

No greater refinement in technique has been given the surgeon than the introduction of gloves

by Friedrich. It goes without saying, however, that the same careful disinfection is to be carried out as if one were to proceed without them.

Of late iodine has come into vogue, and, as Senn remarked, "as an antiseptic, iodine has not received the attention it merits." The most common and most dangerous microbe with which the surgeon has to contend, the streptococcus pyogenes, is killed in two minutes when exposed to a solution of iodine of one fifth of one per cent.

Dr. Walker called attention to the experiences of Lausanne, Grossich and others with tincture of iodine as a disinfectant, and gave his own, which has covered more than two years, and at a conservative estimate, the tincture, 15%, he has used in more than one thousand applications. He has used it in the polyclinic at St. Mary's and Harper Hospitals and in country operating. In every condition a surgeon could encounter in this time he has found that Grossich's procedure of disinfection with 15% tincture of iodine is a decided addition to the difficult problem of obtaining asepsis in wound healing.

This paper was discussed by Drs. Parmeter, Fay, Spitzley, Blain, Longyear, Carstens, Davis and Frank Walker.

At this meeting the following new members were elected: F. B. Ashton, J. A. Beall, E. W. Henderson, Thos. Kenning, J. M. Cooper, Edw. Rodd, A. D. La Ferte, J. F. Siefert, Douglas Rothschild, Rudolph Opperman and F. Harry Smith. As associate members: Leonard A. Seltzer, Rueben Peterson of Ann Arbor, E. A. Christian of Pontiac, N. S. Ferry, Norman S. Chamberlain and Gustave Gillbey.

Dr. Carstens moved that the letter received from the Nurses Central Directory be published in two issues of the bulletin. He also urged the doctors to take note of this letter, and remarked that it is only by means of the support of the doctors of the Wayne County Medical Society that this directory can possibly be a success.

On motion of Dr. Carstens the following resolutions were passed: *Whereas*, Dr. E. W. Haas has been an efficient member of the Board of Health, *Resolved* by the Wayne County Medical Society, that Governor Osborn be and is hereby requested to reappoint Dr. E. W. Haas to the Detroit Board of Health.

The communication regarding the chiropractic act was referred to the legislative committee.

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At the meeting of the Medical Section held Monday, February 27, Drs. E. W. Haas and Hugo

A. Freund read papers on the "Treatment of Parenchymatous Nephritis."

The first paper was by Dr. Haas, on

**"The Dietetic Treatment of Acute and Chronic Parenchymatous Nephritis."**

Abstract: the dietetic treatment must be adapted to the extent and nature of damage done to the kidneys. Every damaged kidney under-functionates to a greater or lesser extent. The amount of albumin in the urine is not necessarily an index of the damage. The two substances chiefly concerned in retention are the chlorides and the nitrogen bodies. In the healthy, the chloride equilibrium is maintained because there is as much eliminated as is taken in in the food. Very small amounts maintain this equilibrium. The excess is eliminated by the healthy individual, almost all by the kidneys. The ability to excrete the chlorides may be much impaired. As soon as the amount ingested exceeds the amount excreted the salt is retained, water with it, weight is increased and oedema results.

The amount of nitrogen eliminated should be equal to the amount ingested. The individual is then in a nitrogen balance. Ninety per cent. is eliminated by the kidneys. Nitrogen elimination may be impaired with resulting increased nitrogen arrest in the blood. This may take place with chloride retention or may appear independently. The uremia of retained nitrogen is much more dangerous than that due to chloride retention.

Milk, the so-called "Karrell cure," is both salt-poor and proteid-poor, but is not salt-free. Salt-free diet should contain sufficient calories, with little salt,  $1\frac{1}{2}$  grams per day. Salt-free bread, unsalted butter, one to two eggs, cream, unsalted cheese, potatoes and cereals prepared without salt, sugar, and fresh meats prepared without salt, if necessary boiled to extract salt. If the amount of salt be kept down we can limit the amount of fluid. In nitrogen retention the nitrogenous elements should be stricken from the dietary for a time. We may give water, carbohydrates, sugar and occasionally vegetables. In acute nephritis and in the acute exacerbations of chronic parenchymatous nephritis rest is needed. We give small quantities of water, to which may be added one hundred to two hundred grams of sugar, if necessary, to furnish the corresponding calories.

The second paper of the evening was read by Hugo A. Freund, on

**"The Treatment of Acute and Chronic Parenchymatous Nephritis, other than Dietetic."**



**Abstract:** The only true forms of nephritis are the acute and chronic parenchymatous. Interstitial nephritis is primarily a cardiovascular disease.

The treatment may be grouped under three heads: 1, Rest for the kidneys. 2, Prevention of retention of waste products. 3, Symptomatic treatment.

In acute forms rest is instituted in order to obtain a return of the normal functions.

In the chronic state we must attempt to prolong life by taking all unnecessary work off the kidneys and by preventing complications.

To establish rest, means placing the patient in bed until all symptoms and signs have abated. The heart must be as quiet as possible, best obtained by the ice-bag over the precordium. The functions of the digestive tract must be strictly supervised. Fever when present is better controlled by hydrotherapy. These all give rest to the kidneys. They are engorged with blood, fluid, toxins and necrotic products. Only chipped ice and a maximum of 500 c. c. of fluid should be given daily, so as to permit a return of function. Heat, wet cups or a cautery over the kidney region relieves pain. In no other condition does blood-letting cause so much good. The ice-bag in my experience does harm.

Relief of the symptoms caused by retention can be brought about by diaphoresis, catharsis and diuresis.

Mild diaphoresis removes up to 29 per cent. of retained products. Severe sweating may carry off even 50 per cent. of such substances. The pack, steam bath or hot air cabinet may be employed. They should all be carefully watched, for with threatened uremia they may precipitate an attack by concentrating those substances that cause uremia.

Catharsis is always to be resorted to. The salines, especially in concentrated form, work well. Jalap and elaterium are often to be preferred in individual cases.

Of the diuretics the digitalis group are more often available. Digitalis not only has a local diuretic action, but it relieves chronic passive congestion and improves the circulation in the kidney. It is unfavorable in the presence of high-blood-pressure. The caffein series, diuretin, caffein sodium benzoate, agurin, theocin, etc., have a great diuretic effect especially when taken with water. Calomel, (we are not sure how it acts), may always be employed, for it also acts by increasing intestinal elimination. There are many other milder diuretics. The best of

all, and where increase of flow through the kidneys is sought, is water given in copious draughts.

The hygiene of the chronic nephritic must be supervised. Warm clothing, equable climate and freedom from exposure to cold is desirable. Warm baths 90 degrees to 95 degrees are always advisable. Moderate exercise and massage are useful adjuncts.

For the anemia iron, as we find it in Basham's mixture or the syrup of the iodide of iron, answers all the requirements.

The papers were discussed by Drs. Donald, Jennings, Walter Parker, Geo. Duffield, W. J. Wilson, Jr., Kiefer, J. E. Clark and Morley.

At the meeting of the Wayne County Medical Society, held Monday, March 6th, Dr. C. Hollister Judd read a paper on

#### **"Blood Pressure in Pregnancy."**

**Abstract:** The object of the paper is to show the normal and abnormal changes in blood pressure during pregnancy, parturition and the puerperium; also, if possible, to elucidate any relationship between blood pressure and marked conditions of the kidneys, liver and circulatory system.

After numerous experiments with various instruments, the Tycos instrument was chosen and used in all the experiments. The differences in the instruments make it difficult to compare the results of the various writers. For this reason one instrument was used, and the results accordingly are more uniform.

Some observers found a typical rise in blood pressure, beginning in the early months and progressing in height as pregnancy advances. This the writer was unable to demonstrate. On the contrary, this series of cases led him to believe that the normal circulatory system is fully capable of bearing the increased work of gestation without showing any increase of blood pressure.

To be of the greatest use in obstetrics, the blood pressure should be first taken in the early months, and a blood pressure chart should be kept.

The relationship of the blood pressure to the condition of the urine was found to be quite constant. In a typical abnormal case the increased blood pressure or nucleo-albumin would first appear; then, as the pressure increased from 15 to 20 m. m. of mercury, serum albumen and serum globulin would be found in the urine. The height of the blood pressure increases in about the same proportion as these two elements increase in amount.

During labor, as the pains begin to be frequent

the mean pressure is raised considerably above the normal. When a pain appears there is at first no elevation of the blood pressure, but in a minute or two the blood pressure rises and its height and duration are approximately the same as the uterine contraction.

After labor the blood pressure falls below normal. It again gradually returns to normal in about two weeks.

Conclusions: 1. A careful urinalysis should always be made; regard with suspicion a trace of albumen; separate the albumens in dangerous cases and use an Esbachs albuminometer.

2. Nucleo-albumen is nothing like as dangerous a constituent of the urine as are serum-albumen and serum-globulin.

3. Patients after delivery or eclampsia with high blood pressure should be kept under observation. Notice if the pressure falls normally after labor.

4. High pressure with cerebral symptoms, serum-albumen and serum-globulin in the urine, consider emptying the uterus before convulsions appear.

5. Great hypertensions, like hyperpyrexia, may require treatment in itself.

6. It is likely one could foretell or prevent eclampsia by a blood pressure chart.

7. Blood pressure charts would be of service in foretelling shock, and also concealed hemorrhage from the association of these conditions with the vaso-motor system. A woman can bleed to death in her own abdominal vessels.

This paper gave a report of two hundred cases embracing the work of the last two years. The greater part of this work, he said, was done in the well equipped Grace-Whitney-Hoff research laboratory of the Women's Hospital.

The paper was discussed by Drs. Manton, Mercer, Yates, Carstens, Holmes, Bell and Longyear.

The following new members were admitted: active member, Carl F. Muenz; associate members, Archibald W. Diack, C. B. Burr, and Chas. T. Southworth.

#### MEETINGS HELD AT THE HOME

On Wednesday, Feb. 15, the Oto-Laryngological Society met. The program was as follows:

a. Stereoscopy of Sinuses and Mastoid, by Dr. P. M. Hickey.

b. Sarcoma of the Mastoid Region, by Dr. Emil Amberg.

c. A New Light, by Dr. Harold Wilson.

d. Technique of Tonsil Enucleation, by Dr. R. E. Mercer.

On Thursday, Feb. 16, Dr. Prince A. Marrow, of N. Y., gave a lecture on "Sex Hygiene." This lecture was under the auspices of the Society for Sex Hygiene.

On Thursday, March 2d, the Detroit Medical Club met. Dr. Stevenson read a paper on "Contribution of Physiologic Chemistry to Therapeutics."

The formal opening of the Wayne County Medical Society Home at 33 E. High Street occurred Wednesday evening, March 22d, with a reception to members, their ladies and guests, given by the president and ex-presidents of the Society.

R. C. ANDRIES, *Correspondent.*

## NEWS

### DINNER TO DR. CONNOR

In recognition of his completion of forty years in the practice of medicine, and of his high attainments in his profession, his medical confreres gave Dr. Leartus Connor a dinner at the Detroit Club, February 23, 1911. Toasts were responded to by Drs. W. P. Manton, L. E. Maire, C. B. Stockwell, Guy L. Kiefer and F. B. Tibbals. The arrangements committee consisted of Drs. J. E. Emerson, A. D. Holmes, A. P. Biddle G. E. Frothingham and B. R. Schenck.

Ninety-eight guests were present to do honor to the man who by continuous service has done so much for his brother practitioner.

CORINNA BORDEN KEEN RESEARCH FELLOWSHIP OF JEFFERSON MEDICAL COLLEGE.—The accumulated income of this fund now amounts to \$1,000. The fellowship will be awarded by the Trustees upon recommendation of the Faculty to a graduate of the Jefferson Medical College of not less than one, nor more than ten years' standing, upon condition that he shall spend at least one year in Europe, America, or elsewhere, wherever he can obtain the best facilities for research in the line of work he shall select, after consultation with the Faculty; and that he shall publish at least one paper embodying the results of his work as the "Corinna Borden Keen Research Fellow of the Jefferson Medical College." Address

Dr. J. W. HOLLAND, *Dean.*  
Philadelphia.

**BEWARE OF ITINERANT MORPHINE AND COCAINE TABLET PEDDLERS.**—Manufacturers, jobbers, dispensers and others obliged to keep considerable stocks of morphine, cocaine and various forms of tablets of the same, suffer considerable loss from theft owing to an illegitimate demand and the ease with which the drugs are concealed about the person.

A man described as about 5 feet 10 inches, light brown hair, wearing a light gray overcoat, well dressed, nice looking, with a nice way, seeming to know the price of morphine and cocaine, etc., called on the Hort-Schaeffer Drug Co., Omaha, Neb., about January 23d, and tried to sell 5,000 H. T. 26 P. D. & Co. at \$5 per M; said he had sold 30,000 already and had 5,000 more to sell. Refused to call again to see Mr. Hort. When the clerk tried to get finishing number he took package away from him with the remark: "If you don't want them o. k., I can sell them without any trouble." He claimed to be from the East—either New York or Philadelphia—saying he sold different things at different times, and now was the time to get in easy, as morphine, etc., was going up all the time.

Dr. Frank Smithies has been ill for about three months, and is now recuperating at Lakeside Cottage, Lake Geneva, Wis.

## COMMUNICATIONS

NEW YORK, N. Y., March 13, 1911.

DEAR DOCTOR:—

At a meeting of the House of Delegates of the American Medical Association held in St. Louis, Wednesday, June 8, 1910, the following resolution was presented by Dr. Hubert Work, of Colorado:

*Whereas*, the plan of organization of the profession carried to its logical conclusion means that every member of a county society should be *ipso facto* a member of the American Medical Association, just as every member of a county society is *ipso facto* a member of a state society, and as it is the ultimate end of the plan that the American Medical Association should be co-extensive with the organized profession throughout the land, and as nearly, if not quite, every state already has adopted the plan so far as making every member of a county society a member of a state society, therefore be it

*Resolved*, That the President appoint a committee to draw up details for extending the plan to the American Medical Association, and to present this plan to the various state societies for their consideration during the coming year, and to make a report at the next annual meeting of the House.

Dr. Alexander Lambert, of New York, moved as an amendment that the resolution be referred to the Board of Trustees, because it means a separation of *The Journal* from the membership in a manner which involves the finances of the Association.

The amendment was seconded, accepted, and the original motion as amended was carried.

The Trustees have given this matter full consideration, and at a meeting held in Chicago on February 3, 1911, the following resolution was passed:

*Resolved*, That the Board of Trustees refer to the various State societies the question of the desirability of extending the plan of organization as represented in the foregoing resolution, and request that the various state societies take action on this matter and report to the Board.

In accordance with this last resolution I beg herewith to transmit the matter to your Society for consideration, and request that your report be sent to the Board of Trustees, American Medical Association, 535 Dearborn Ave., Chicago, Ill.

Very truly yours,

WISNER R. TOWNSEND,

Secretary Board of Trustees A. M. A.

Dr. Wilfrid Haughey,

Secretary Michigan State Medical Society,  
Battle Creek, Mich.

Detroit, Mich., March 21, 1911.

WILFRID HAUGHEY, M. D.,  
Battle Creek, Mich.

Dear Sir:—In the *JOURNAL* of the Michigan State Medical Society, I notice your editorial on life insurance examination fees, and I hope the members of the Society will uphold those views.

Life insurance success depends upon careful examination by the physician, and this takes time and skill, and these should be paid for.

When I became Medical Director of the Detroit Life Insurance Company, the first thing I insisted on, was that the fee for medical examination should be five dollars, and if any special examination would be required, an additional fee should be paid.

This seems to me the only correct view. If



we all stick together, we will gain our object. All insurance companies who do not pay the regular fee should be tabooed.

Yours truly,

J. H. CARSTENS.

DETROIT, MICH., March 14, 1911.

WILFRID HAUGHEY, M. D.,

Sec. Michigan State Medical Society,  
Battle Creek, Mich.

Dear Dr. Haughey:—The following states are in reciprocity with Michigan at the present time:

QUAL. I.

District of Columbia  
Georgia  
Illinois  
Indiana  
Iowa  
Kansas  
Kentucky  
Maine  
Maryland  
Minnesota  
Missouri  
Nebraska  
Nevada  
New Hampshire  
New Jersey  
New York  
North Dakota  
Ohio  
South Carolina  
Vermont  
Virginia  
West Virginia  
Wisconsin  
Wyoming  
Utah  
Texas  
Arkansas  
Louisiana  
Tennessee

QUAL. II.

Georgia  
Indiana  
Iowa  
Kansas  
Kentucky  
Maine  
Maryland  
Minnesota  
Missouri  
Nebraska  
Nevada  
Ohio  
Vermont  
West Virginia  
Wisconsin  
Utah  
New Hampshire  
Arkansas  
Tennessee  
Louisiana

Yours very truly,

B. D. HARISON, *Secretary*.

## BOOK NOTICES

**The Blues** (splanchnic neurasthenia). Causes and Cure. By Albert Abrams, A. M., M. D. (Heidelberg), F. R. M. S., illustrated. Fourth edition, revised and enlarged. New York: E. B. Treat and Company, 241-243 West 23rd Street, 1911.

Seekers after a cause for The Blues will find much in this book to encourage their search. Through the work an optimistic view is taken of

a pessimistic subject. Causes are discussed, and where possible, means to avoid them are pointed out. Defects in treatment and how to correct them are indicated.

The subject is treated under various appropriate headings, and attention is called to the numerous disturbances in the physiological action of different organs that will cause The Blues, or neurasthenia, as disturbances in circulation and blood pressure from arterial changes, congested liver, intestinal auto-intoxication, etc. The book is well illustrated, and the following quotations show the scope of thought:

"Man by the unbridled indulgence of his passions is constantly paying the penalty for his sacrifice of self control."

"Heredity and environment may be effectually fought by personal effort."

"Mold and decaying vegetables in the cellar weave shrouds for the upper chambers."

The author lays particular stress upon the causes of The Blues, and insists that each cause requires its own particular method of treatment. In speaking of hereditary causes, he uses these words, "We must not forget, however, that the autocratic reasoning of the hereditarian is by no means final, nor must we blindly submit to a ruling which would deprive the unfortunate neurotic of all hope."

**Compend of Gynecology.** By William Hughes Wells, M. D., Associate in Obstetrics in the Jefferson Medical College. Fourth edition, revised and enlarged, with 153 illustrations. Philadelphia: P. Blakiston's Son & Co., 1911. Net \$1.

The value of Compend in general is a mooted question. They try to cover a field that is too large for the space, but many succeed surprisingly well in covering that field. Dr. Wells in this compend has stored up a wealth of information in short, clear phrases, and arranged in such an easily accessible manner that we cannot but commend the book to those too busy to search the larger texts.

**Manual of Physical Diagnosis.** By Brefney Ralph O'Reilly, M. D., C. M., F. T. M. C., Toronto, M. R. C. S., Eng., L. R. C. P., London, Demonstrator in Clinical Medicine and in Pathology, University of Toronto. With six plates and sixty-six other illustrations. Philadelphia: P. Blakiston's Son & Co., 1911. \$2.

This is a very attractive little book with round corners, printed in a large, easily legible type on a high machine finish paper. The cuts and plates are excellent. Each paragraph is indexed in blackfaced type. The text is simply and clearly written, and just complete enough to make the book a valuable aid in the ordinary case. It is not an exhaustive treatise on diag-

nosis, but is remarkably complete for its size, and is fully up to date.

**Modern Treatment.** The Management of Disease with Medicinal and Non-medicinal Remedies; in contributions by American and foreign authorities, edited by Hobart Amory Hare, M. D., assisted by H. R. M. Landis, M. D. In two volumes, Volume II. Illustrated. Lea & Febiger, Philadelphia and New York.

The second and final volume of *Modern Treatment and Management of Disease with Medical and Non-medical Remedies*, by Hare, is now complete, and in every way upholds the impression made by the first, which was reviewed in the January number 1911, to which the reader is referred. For a two volume work the subjects are handled more at length than would at first seem possible, and while argument is not indulged in and theory and opinions are sometimes shortened, this is not done at the expense of clearness and scientific demonstration. For example, in treating malarial infection, the role played by the anopheles mosquito is thoroughly explained, with cuts of sections of the stomach and salivary gland, showing development of plasmodium from its ingestion by the mosquito to the final development and infection of a new patient, also plates showing plasmodium in all the variations in the blood cells.

In this work the term heart failure is elevated to the dignity of an entity recognized as a disease, and the condition explained as a lowering or lessening of heart force. The heart is described as having two forces, a rest force and a work force. Heart failure begins by lessening the work force, and becomes serious (fatal) when the rest force is lessened or diminished.

The anemias and leukemias receive sufficient attention. Two good plates show stained blood cells, and materially aid in understanding these conditions. Two beautiful cuts of pellagra, one of face, one of hand, are interesting, and beautifully illustrate the descriptive text of the new subject so nicely given by Harris in this work.

Many of the special subjects receive attention; thus the two volumes cover the active field, and will be found to be a valuable treatise on the modern understanding of practice of medicine.

**Lessons on the Eye**, for the use of undergraduate students, by Frank L. Henderson, Chairman of the Ophthalmic Section of the St. Louis Medical Society; Ophthalmic Surgeon to the St. Mary's Infirmary, etc. Fourth Edition, Revised. Philadelphia: P. Blackiston's Son & Co., 1910. \$1.50 net.

This little book is profusely illustrated, and the many affections of the eye are clearly and concisely described. Cause and treatment receive their fair share of consideration, but details are

purposely omitted throughout the work. It is a useful handbook on the subject.

**Golden Rules of Diagnosis and Treatment of Diseases**, Aphorisms, Observations and Precepts on the methods of examination and diagnosis of disease, with practical rules for proper remedial procedure, by Henry A. Cables, B. S., M. D., Professor of Medicine and Clinical Medicine of the College of Physicians and Surgeons, St. Louis; Consultant, Jefferson Hospital, St. Louis, etc. St. Louis: C. V. Mosby Company, 1911. Net, \$2.50.

This book should be on the desk of every practising physician in the United States; not in his library, but on the desk, where he can refer to it twenty times a day. It is made up of short, terse statements of diagnostic facts, heretofore unassembled and inaccessible, except in large volumes and extensive works. More practical points can be looked up in five minutes in this book than can be found in the large volumes in two hours of toilsome reading. It is short, practical, handy, good.

**Systemic (including Special) Pathology.** By J. George Adami, M. A., M. D., LL. D., F. R. S., Professor of Pathology, and Albert G. Nicholls M. A., M. D., F. R. S., Assistant Professor of Pathology in McGill University, Montreal. In one octavo volume of 1160 pages, with 301 engravings and 15 plates. Cloth, \$6 net. Lea & Febiger, Philadelphia and New York, 1911.

This is Volume II of Adami and Nicholls' *Principles of Pathology*. Like Vol. I, it is profusely illustrated, many of the illustrations being original, and published here for the first time. The text is divided into various systems, and each treated in a section by itself, and as a separate entity: the cardiovascular, the respiratory, the alimentary, the nervous systems, the ductless glands, the urinary, reproductive, tegumentary, muscular, and osseous systems. These are handled fully and entertainingly, as much as the subject will permit. The work makes the subject of pathology much different from the dry grinding so many of us found it when in college. This set of books is second to none as a working library of pathology.

**Plastic and Cosmetic Surgery**, by Frederick Strange Kelle, M. D., Fellow of the New York Academy of Medicine; Member of Deutsche Medicinische Gesellschaft, N. Y., etc. With one colored plate and five hundred and twenty-two illustrations in text. New York and London: D. Appleton & Co., 1911. Net, \$5 cloth, \$6 half leather.

Plastic Surgery is an important department, one that is appealed to by many persons with blemishes or defects both hereditary and acquired. These defects are a continual annoyance to the patient who wishes relief. The subject is unsatisfactorily treated in our general text books, and only at random in our journals. This volume is most complete, gathering material from every source, and presenting it well illustrated, show-

ing the technique of the operation, and in many instances the result. Much of this surgery does not give as happy results as we would wish, but only by a thorough study of various methods can one select the best for a particular case. To one who does any plastic or cosmetic surgery this book is valuable.

**Care of the Patient.** A book for nurses, by Alfred Hanes, A. M., M. D., with six illustrations. Philadelphia: P. Blackiston's Son & Co., 1911. Net, \$1.

This is a very thorough little book, giving explicit directions to the nurse, telling her exactly what to do in caring for her patient. There are two chapters on Medical Nursing, one on Surgical Nursing, one on After Care of the Patient and two on Maternity Nursing. Each step in the procedure of the nurse in making dressings is set forth serially and plainly.

The book will prove of great value both to the nurse and to the physician who instructs her.

**A Handbook of Practical Treatment.** In three volumes. By seventy-nine eminent specialists. Edited by John H. Musser, M. D., Professor of Clinical Medicine, University of Pennsylvania; and A. O. J. Kelly, M. D., Assistant Professor of Medicine, University of Pennsylvania. Volume I: Octavo of 909 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Per volume, cloth, \$6, net; half morocco, \$7.50 net.

Volume I of Musser and Kelly's Practical Treatment has reached us. It is a beautiful volume, devoted to general principles, physical methods, intoxication, blood, lymphatics and ductless glands. It is a broad, deep, substantial foundation for the superstructure of the two succeeding volumes which are to follow.

The phenomena of life, health, disease, are constantly yielding their secrets. Ideas of two decades ago are no longer tenable. Teleology considers man as an organism of the highest type, biologically subject to the same laws that govern the most elementary forms of life. The correct interpretation of these laws, with the proper enforcement of their requirements, form the basis for an elaborate and fascinating discussion on preventive treatment, dietetics, drugs, serum, and organotherapy.

A chapter on Rest Cure, Work Cure, and Psychotherapy is followed by others on Exercise, Massage, Mechanotherapy, Hydrotherapy, Balneotherapy, Climatotherapy, Artificial Aerotherapy, Electrotherapy, Radiotherapy, Miscellaneous Therapeutic Measures, and General Care and Management of the Sick.

Chapters on food intoxications and other poisons, reptile and insect venoms and bites, drug habits, blood and ductless glands complete this volume.

One is impressed with the thoroughly scientific tone of each article. Wherever convincing answers and reasons cannot be given, the fact is so stated, and a wise and judicious silence is maintained.

This fascinating volume promises much, which, if carried out, in the two that are to follow, will place before the profession a work unexcelled by any now obtainable.

The authors seem to have hit upon a way to discuss scientific subjects in a pleasing and entertaining manner.

Sample quotations from the book:

"I remain largely influenced by the belief that the average food-intake of a large number of normal persons, a food-intake that is determined for the most part by the appetite, is a fairly close indicator of the average normal man's wants."—DAVID L. EDSALL, in "Starvation and Overfeeding."

"Development of immunity is the natural termination of many acute infectious diseases, provided the infection and its consequence do not destroy the cellular mechanism of self-healing."—LUDVIG HEKTOEN, in "Serumtherapy."

"Write your own prescription. Do not be coaxed or bullied into the use of myriads of ready made formulas and proprietary mixtures."—M. HOWARD FUSSELL, in "Care and Management of the Sick."

### SALVARSAN

C. H. McKenna, Chicago (*Journal A. M. A.*, March 18), says his own experience and the observations he has made in Europe and this country convince him that under no circumstances should salvarsan be used without also using mercury or the iodids. He considers it, however, the therapy of election in the early treatment of the primary lesion in all affections of the mucosa mouth, throat and nose, in obstinate cases with cutaneous lesions resistant to mercury or the iodids, in all cases of gummata, in affections of the central nervous system where the spirochete may remain as the exciting cause, in congenital syphilis, and in the galloping syphilis of Unna. Before it is used, of course, the cautions insisted on by Ehrlich must be followed out, i. e., that the patient must be in a healthy condition apart from the specific disease. The immediate efficiency is judged by the Wassermann reaction becoming negative within a reasonable period, usually in about five weeks, and he reviews the published experience of those who have reported in regard to this. Of the



methods of using the remedy, only two need be considered—the intramuscular (including the suprafascial) and the intravenous method. He quotes a letter from Ehrlich stating his preference for the intravenous method. McKenna, however, thinks the latter more dangerous and the extravenous methods equally efficient.

### ADVERTISING AGENCIES

Some people seem to have a peculiar idea of their real place in the world of work; they seem to think it is their duty or their right or their prerogative to run other people's affairs for them. Thus the life insurance companies, a few years ago, considered it their duty or their right to fix the fees which physicians should charge for making examinations for life insurance. Most of them have gotten over that idea. The New York Life still is possessed of the obsession, however, and therein should receive the condemnation of every reputable physician; if all would follow the example of the physicians in San Mateo County, the New York Life would wake up. Some advertising agencies are good enough to offer your JOURNAL an occasional advertisement at most ridiculous rates; it might be suspected that the advertiser was paying regular rates to the agency and the agency "appropriating" (that is a mild word) most of the amount. Be that as it may, we desire to take this opportunity

to say to such agencies that we are not a hold-up game, we are not an object of charity, we have not the official hat extended for receiving stray pennies of the charitable passing, nor yet are we an eleemosynary institution. We have definite advertising rates; we are glad to print proper advertisements at those rates; we deliver the goods we agree to deliver; we do not ask any favors from any one; advertising is a business proposition and we are in the publishing business—we are not here to be a party to the scheme of helping some one else get money from an advertiser for that some one's own personal benefit. We may add that this simple policy pays. A number of our advertisers have recommended this JOURNAL to other advertisers; a large number of our readers have responded to our request to consider this question of advertising, have read the editorial notes on the subject from time to time, make it a rule to look through the advertising pages, and find that it is distinctly to their advantage to do so. Recently an advertiser wrote us that he had made a number of excellent sales from his advertisement in one issue, and stated that three or four people had voluntarily referred to an editorial on the advertising question. "It pays to advertise;" yes, and it pays to read advertisements. Do it; read those in your own JOURNAL.—*Editorial California State Journal of Medicine, March, 1911.*

### LEGISLATIVE MATTERS

(Continued from page 187.)

A bill has been introduced in the legislature, the title and text of which we have not yet seen, transferring the Examination of Embalmers from the State Board of

Health to the State Board of Registration in Medicine. This work at present swamps the State Board of Health, would materially increase the income of the State Board of Registration in Medicine, thus helping to meet their present difficulties, and would not overtax their present facilities.

### MICHIGAN STATE BOARD OF REGISTRATION IN MEDICINE

#### ADDITIONAL REGISTRATION IN MICHIGAN

Name and Address	College and Date of Graduation	Qualification	Date of License
Sears, Chas. Edward, Utica, Macomb, Mich.	Univ. Coll. of Med. Richmond, Va., May, 1899	Recip. Qual. I	2-16-11
Epperson, Adah, Traverse City, Mich.	Northwestern Univ., June 20, 1901	Recip. Qual. I	2-20-11
Negley, James Casper, Ann Arbor, Mich.	Dept. of Med. & Surg. Univ. of Mich., Dec. 21, 1910	Exam. Ann Arbor, June, 1910	3-2-11
Dobson, Gertrude, Quincy, Mich.	Hering Med. Coll. and Hosp., June, 1909	Recip. Qual. I	3-11-11

# FRACTURES AND DISLOCATIONS

Conducted by

W. K. WEST, M. D., Painsdale

## THE VALUE OF ANESTHESIA AND THE X-RAY IN THE TREATMENT OF FRACTURES

The majority of fractures will always be treated by the general practitioner, even though he may do little other surgical work. Many of these cases require considerable skill and surgical judgment, and the physician should be familiar with the best methods of diagnosing and treating these injuries if he expects to meet with success. He should possess a thorough anatomical knowledge of the parts involved, the muscular attachments and actions, and the vessels and nerves in the region of the injury. Poor results will follow, sometimes, the most correct and skilful treatment, yet we know that such results are more often due to lack of experience or improper care of the attending physician. These are the cases that, more often than any other branch of our work, give rise to malpractice suits, so that we should be able to use any means that will enable us to correctly diagnose the injury and apply the proper treatment. There are two measures which I wish to refer to because I do not believe that they are used to the extent that they should be. They are general anesthesia and the X-ray. I know that ether or chloroform are used frequently, and probably always, where the injury is severe or the manipulation of the parts accompanied by great pain. Some fractures require no anesthetic, but there are no doubt many reduced without it, when its use would be of very great advantage. With the patient quiet and the muscles completely relaxed, the physician can have a clearer idea of the extent of the fracture, and the associated injury of the soft parts, and a better approximation of the ends of the bones secured.

All will admit the value of the X-ray in diagnosing injuries of bones, but believe that it is only in a certain few fractures that its use is really necessary, and consequently in only a very small percentage of cases is it used. Like many other things, its great value in many cases is not appreciated except by those who have used it a great deal. Emil Beck, of Chicago, in a recent article in *Surgery, Gynecology, and Obstetrics*, says that "the radiograph has now become a diagnostic agent so useful as to be almost indispensable. Nevertheless, there exists among surgeons and general practitioners an undercurrent of skepticism as to its real value." I do not believe that it is more clearly indicated in any class of surgical cases than in fractures, and instead of its use being limited to the few cases that it is now used in, its use should become much more of a routine by the general practitioner. In the Copper Range Medical Service we are now using it in a large propor-

tion of our cases, and in over a hundred skiagraphs of fractures treated last year we have been convinced of its great value a number of times, in those cases where the physician might not believe it was needed. A mistaken diagnosis between a sprain of the ankle or a fracture of the lower end of the fibula is no doubt not uncommonly made; and fractures of the bones of the hand or foot may be quite difficult to detect and the injury considered only a severe bruise. In these cases the patient may be incapacitated from work much longer than his doctor had given him to understand, and he may seriously question the correctness of the treatment. In fractures of the long bones, particularly where there is much displacement, or crepitus easily heard, the diagnosis is readily made, but in some of these fractures, where there is little displacement or the bones impacted, or the patient fleshy, the diagnoses may be in doubt without the skiagraph. In some cases, if only one skiagraph is taken, it may be more satisfactory and important to have it a few days after the splints have been applied, to know if a proper reduction of the fracture has been made and if the bones are being held in good position. In hospitals it can be arranged to have the X-ray machine taken to the bedside for those injuries where the patient can not be moved without displacing the bones. We have found this very satisfactory in fractures at the hip joint or of the femur.

Many busy physicians will be unable to spend the time required in taking skiagraph and developing the plate, and the fluoscope is not satisfactory. But there might be in any of the smaller cities or towns one physician able and willing to do this work, and if he received the encouragement and support from the other doctors, he might be willing to equip himself for it. Younger physicians, not rushed with practice, could do this work with great benefit to themselves and the community, and most patients will appreciate the efforts of their attending physician to have a correct diagnosis made and will be willing to pay the additional fee. The use of the skiagraph should not exclude other methods of detecting fractures, but it will frequently enable the physician to be more accurate in diagnosis, and his results more satisfactory than they can be without it. The public are always entitled to as correct a diagnosis as possible, and if the X-ray was used in conjunction with other means more often than it is, there would be fewer bad results, and the physician spared the embarrassment of a wrong or incomplete diagnosis.